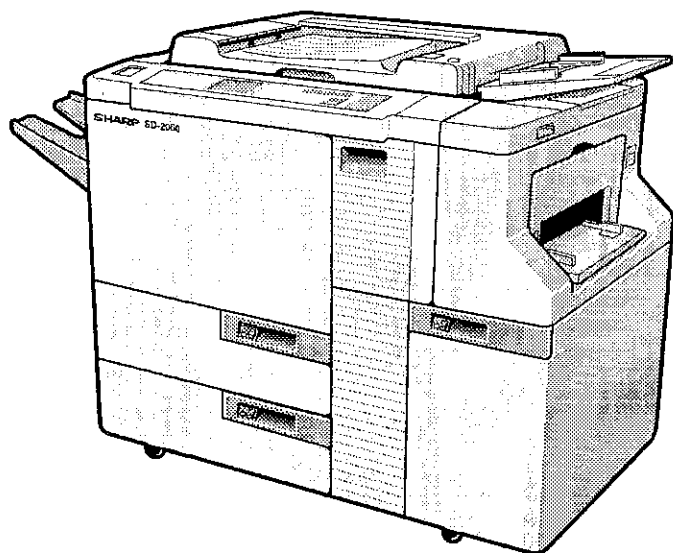


# SHARP SERVICE MANUAL

CODE:00ZSD2060FM/E



## NO.1

### MODEL SD-2060

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Parts marked with "△" are important for maintaining the safety of this unit. Be sure to replace these parts with only the specified ones for maintaining the safety and performance of this unit.

**SHARP CORPORATION**

This document has been published to be used  
for after sales service only.  
The contents are subject to change without notice.

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# [1] PRODUCT OUTLINE

## 1. SD-2060

The SD-2060 has an original replacement speed of 60 sheets (A4 and 8.5"x11") per minute using the RADF as well as a copying speed of 60 sheets per minute.

In addition, the air feed system reduces the possibility of paper misfeed and the AICS (Active Image Control System) corrects deterioration in copy quality, thereby providing higher reliability.

The large liquid crystal display allows improved maneuverability for the operator and service technician.

## 2. Target usage

Copy volume range: 20,000-80,000 copies/month

Average copy volume: 30,000 copies/month

## 3. Product features

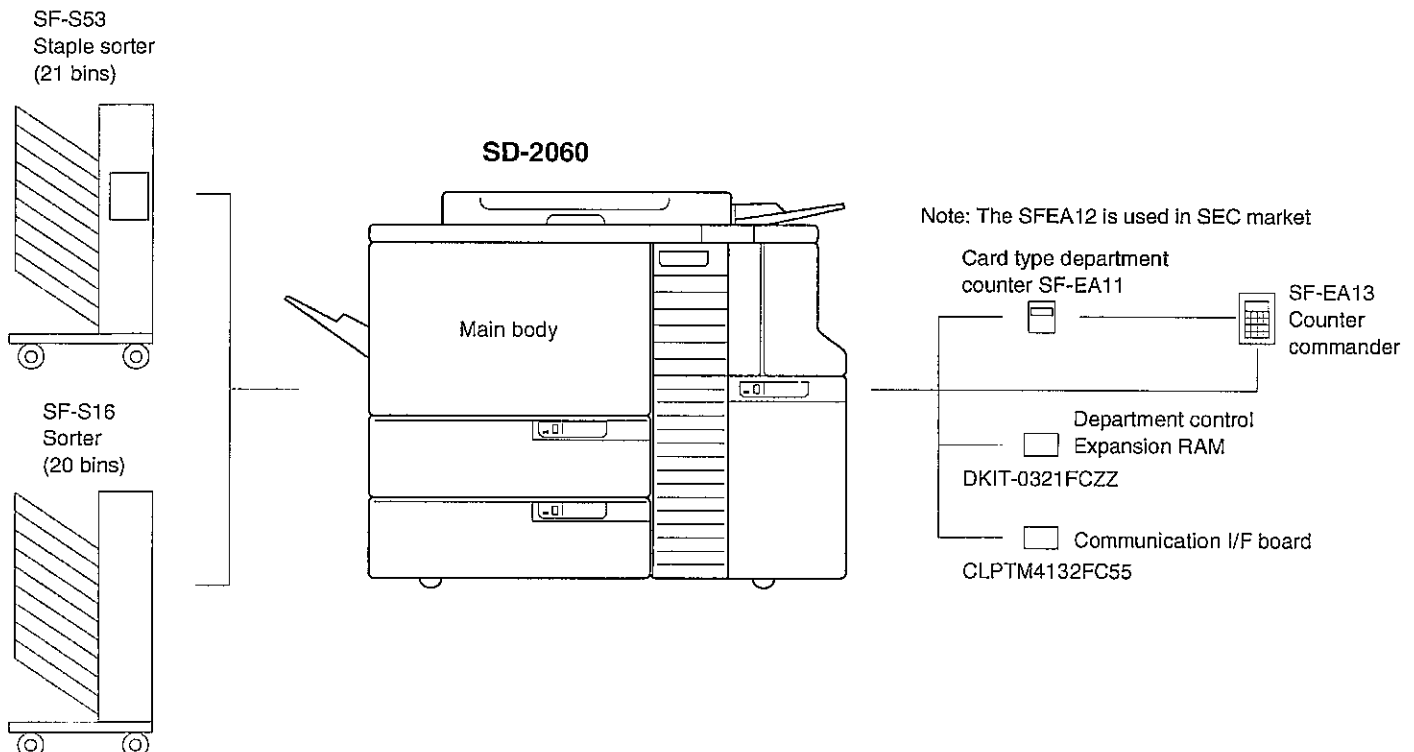
### (1) High productivity

- ① The newly developed RADF realizes 100% efficiency in switching from single copy to duplex copy.
- ② Automatic after-process functions when using the 50-sheet staple sorter (SF-S53).
- ③ Full frame & unit construction  
The frame of the SD-2060 is made of a high strength, rigid construction. Because of this, it can endure long period operations. In addition, the modular construction allows rapid replacement of the sub-assemblies in case of trouble, minimizing down time of the machine.

### (2) High reliability

- ① Air feed system  
By utilizing air pressure without mechanical contact, the paper transport capability is more stabilized than the conventional roller feed systems, reducing the possibility of double feed and misfeed.

## 4. System configuration



### Auto job recovery

This new function allows a misfeed error to be cancelled automatically by removing the minimum number of misfed paper (s) in case of a misfeed error. The drive section of the main body is divided into several blocks which are independently driven, allowing paper feed in the blocks after the misfeed block, and minimizing the number of jammed pages to be removed after the misfeed error.

### ③ Communication error

The SD-2060 can communicate with a remote service center through the telephone line. This feature allows the service technician to identify the error position in advance to making a service visit, thereby reducing the servicing time.

## (3) Ease of operation using the LCD message display

### ① Key operator programs

By using the key operator programs, various mode settings and adjustments can be performed according to the user's requirements. Accurate account control and proper billing for copy usage can also be accomplished with certain key operator codes.

## (4) High copy quality

### ① AICS (Active Image Control System)

Equipped with SHARP's unique AICS (Active Image Control System), Toner density on the photoconductor drum is regularly monitored, and any variation in density due to deterioration is automatically corrected, maintaining high copy quality throughout the life of the photoconductor drum.

## [2] PRODUCT SPECIFICATIONS

### 1. Basic specifications

(1) Type: Console

(2) Kinds of originals

|                    |                                               |
|--------------------|-----------------------------------------------|
| Max. original size | A3, 11" × 17"                                 |
| Copying size       | 5.5" × 8.5" ~ 11" × 17", A3 – A5 (Fixed size) |

(3) Copy speed

| Paper size             | Normal copy   | Reduction (50%) | magnification (200%) |
|------------------------|---------------|-----------------|----------------------|
| 11" × 17"              | 35 sheets/min | 35 sheets/min   | 34 sheets/min        |
| 8.5" × 14"             | 40 sheets/min | 38 sheets/min   | 39 sheets/min        |
| 8.5" × 11" (Portrait)  | 60 sheets/min | 52 sheets/min   | 43 sheets/min        |
| 8.5" × 11" (Landscape) | 44 sheets/min | 43 sheets/min   | 42 sheets/min        |
| A3                     | 35 sheets/min | 35 sheets/min   | 34 sheets/min        |
| B4                     | 40 sheets/min | 38 sheets/min   | 39 sheets/min        |
| A4 (Portrait)          | 60 sheets/min | 52 sheets/min   | 43 sheets/min        |
| A4 (Landscape)         | 44 sheets/min | 43 sheets/min   | 42 sheets/min        |
| B5 (Portrait)          | 60 sheets/min | 57 sheets/min   | 43 sheets/min        |
| B5 (Landscape)         | 44 sheets/min | 43 sheets/min   | 42 sheets/min        |

(4) Paper feed

|                     |                                                   |
|---------------------|---------------------------------------------------|
| Paper feed system   | 3-tray, multi manual feed (Trays can be locked.)  |
| Paper feed capacity | 4100 (2000 + 1000 × 2 + 100, 80g/m <sup>2</sup> ) |

(5) Warmup time SD-2060: Approx. 5 min

(6) First copy time 4.0 sec (Fed from tray 1.)

(7) Misfeed recovery time Within 5 sec (Conditions: Misfeed in a section other than the fuser section within 60 sec from opening the door in the standard conditions)

(8) Appearance

|                        |                                                                   |
|------------------------|-------------------------------------------------------------------|
| Dimensions (W × D × H) | 1167 × 731 × 1038 mm                                              |
| Installation area      | 1627 × 731 mm (When the staple sorter is installed, 1747 × 731mm) |

(9) Weight Approx. 239 kg (526 lbs)

(10) Power source, max. power consumption

|                        |                              |
|------------------------|------------------------------|
|                        | SD-2060                      |
| Power                  | 120V, 20A, 50Hz/60Hz common  |
| Max. power consumption | 2.0KW (including the sorter) |

### 2. Functions

(1) Basic functions

|                                     |                                                                                                               |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Multicopying                        | 1 ~ 999 sheets                                                                                                |
| Copy density control                | Automatic mode, manual mode (9 steps), photo mode (9 steps), toner save mode                                  |
| Tray selection                      | Automatic (Can be inhibited by the key operator program.)                                                     |
| Paper/magnification ratio selection | Possible in RADF operation                                                                                    |
| RADF                                | Simplex or duplex originals, face-down setting                                                                |
| Finish                              | Sort/group (when connected with the sorter)<br>Sort/group/staple sort (when connected with the staple sorter) |
| Automatic duplex copying            | One-side original → duplex copy<br>Duplex original → duplex copy                                              |

(2) Magnification ratio

|                           |                                          |
|---------------------------|------------------------------------------|
| Fixed magnification ratio | 50, 70, 81, 86, 100, 115, 122, 141, 200% |
| Zooming width             | 50 ~ 200%, 151 steps in 1% increment     |

(3) Additional functions

|                       |                                                                                                                                                   |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Dual page copy        | Available                                                                                                                                         |
| Binding margin        | Right binding, left binding<br>Shift amount<br>AB series<br>(0mm, 3mm, 6mm, 9mm, 12mm, 15mm)<br>Inch series<br>(0", 1/8", 1/4", 3/8", 1/2", 5/8") |
| Edge erase            | Edge erase, center erase, edge + center erase                                                                                                     |
| Cover insertion       | Cover only, back cover only, both cover and back cover<br>Cover copying available (single copy, duplex copy)                                      |
| Index paper insertion | Max. insertion quantity: 18 sheets<br>Index paper copying available (Single copying, duplex copying)                                              |
| OHP index sheet       | Index paper copying available                                                                                                                     |
| Auditor               | Standard 500 departments, expandable to max. 3100 departments<br>(When DKIT-0321FCZZ is installed.)                                               |
| Job program           | Number of programs 9 (P1 ~ P9)                                                                                                                    |
| Communication feature | Available when CPLTM4132FC55 is installed                                                                                                         |

### 3. Details of each section

#### ① Original entry section

##### (1) Platen

|                             |                                    |
|-----------------------------|------------------------------------|
| Max. original size          | A3/11" × 17"                       |
| Original reference position | Center reference (Set at left end) |

##### (2) RADF

|                       |                                                                                                                                                                                                                             |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Original capacity     | 50 sheets                                                                                                                                                                                                                   |
| Original size         | A5 ~ A3/5.5" × 8.5" ~ 11" × 17"                                                                                                                                                                                             |
| Original weight       | Single-sided original<br>13~32 lbs (35 ~ 128g/m <sup>2</sup> ) (35 ~ 50g/m <sup>2</sup> for thin paper mode)<br>(Perforated computer form (5.5" × 8.5" ~ 11" × 14.7/8"), perforated original, heat-sensitive paper for FAX) |
|                       | Duplex-sided original<br>13~32 lbs (50 ~ 128g/m <sup>2</sup> )<br>5.5"×8.5" to 8.5"×11" (A5 ~ A4)<br>13~28 lbs (50 ~ 110g/m <sup>2</sup> )<br>8.5"×14" to 11"×17" (A5 ~ A3)                                                 |
| Random/mix paper feed | Available                                                                                                                                                                                                                   |
| Detection size        | B5, A4, B4, A3, B5R, A4R, 8.5" × 11", 8.5" × 14", 11"×17"                                                                                                                                                                   |
| Flow sensor detection | B5, A4, B4, A3, B5R, A4R 8½"×11"(R)×8½"×14", 11"×17"                                                                                                                                                                        |

#### ② Paper feed section

Copying size

A5 to A3, 5.5" × 8.5" to 11" × 17"

| Paper feed port           | Capacity    | Paper size                   |                                                                         | Paper weight                       |                                                                    |
|---------------------------|-------------|------------------------------|-------------------------------------------------------------------------|------------------------------------|--------------------------------------------------------------------|
|                           |             | Applicable range             | Detecting size                                                          |                                    |                                                                    |
| First tray                | 2000 sheets | B5, A4 8.5"×11"              | B5, A4 8.5"×11"                                                         | 15-24 lbs 60 ~ 90g/m <sup>2</sup>  | Standard paper only                                                |
| Second tray<br>Third tray | 1000 sheets | B5 ~ A3 8.5"×11" to 11"×17"  | B5, A4, B4, A3, B5R, A4R, 8.5" × 11"(R) 8.5" × 14" 11"×17"              | 15-32 lbs 60 ~ 128g/m <sup>2</sup> | Standard paper only                                                |
| Manual feed tray          | 100 sheets  | A5 ~ A3 5.5"×8.5" to 11"×17" | B5, A4, B4, A3, B5R, A4R, 5.5" × 8.5", 8.5" × 11"(R) 8.5" × 14" 11"×17" | 15-32 lbs 50 ~ 128g/m <sup>2</sup> | Index paper 65 lbs (176g)<br>Cover paper 110 lbs (200g), OHP, etc. |

#### ③ Duplex section

|                            |                                                             |
|----------------------------|-------------------------------------------------------------|
| Paper size                 | B5, A4, B4, A3, B5R, A4R, 8.5" × 11"(R) 8.5" × 14", 11"×17" |
| Paper weight               | 15-24 lbs 60 ~ 90g/m <sup>2</sup>                           |
| Intermediate tray capacity | 50 sheets (80g/m <sup>2</sup> /20 lb bond)                  |

#### ④ Option

##### (1) Sorter (SF-S16)

|               |                                                             |           |
|---------------|-------------------------------------------------------------|-----------|
| No. of Bins   | Sort bin                                                    | 20        |
| Sortable size | B5, A4, B4, A3, B5R, A4R, 8.5" × 11"(R) 8.5" × 14", 11"×17" |           |
| Capacity      | Sorting                                                     | 50 sheets |
|               | Grouping                                                    | 30 sheets |

##### (2) Staple sorter (SF-S53)

|                   |              |                                                                  |           |
|-------------------|--------------|------------------------------------------------------------------|-----------|
| No. of bins       | Non-sort bin | 1                                                                |           |
|                   | Sort bin     | 20                                                               |           |
| Sorting size      |              | B5, A4, B4, A3, B5R, A4R,<br>8.5" × 11"(R) 8.5" × 14", 11" × 17" |           |
| Stapling size     |              | B5, A4, B4, A3, A4R,<br>8.5" × 11"(R) 8.5" × 14", 11" × 17"      |           |
| Capacity          | sorting      | Min. 8.5" × 14", A3, B4                                          | 25 sheets |
|                   |              | Max.<br>8.5" × 11", A4, A4R, B5                                  | 50 sheets |
|                   | Grouping     | Min. 8.5" × 14", A3, B4                                          | 25 sheets |
|                   |              | Max.<br>8.5" × 11", A4, A4R, B5                                  | 30 sheets |
| Stapling quantity |              | 50 sheets                                                        |           |
| Stapling position |              | Left upper corner, diagonal, 1 position                          |           |
| Stapler cartridge |              | 5000 pcs.                                                        |           |
| Stapler detection |              | YES                                                              |           |
| Alignment         |              | ±1.5mm (maximum-3mm)                                             |           |

### 4. Other options

- (1) Card counter (SF-EA11) (For SEC-SF-EA12 is used)
- (2) Commander (SF-EA13)
- (3) Communication interface board (CPLTM41320FC52, fixing screw: XHBSD40P10000)
- (4) Department control expansion RAM (DKIT-0321FCZZ)

- (5) Key sheet and operation manual kits.

|         |          |
|---------|----------|
| English | SD-260SE |
| German  | SD-260SG |
| French  | SD-260SF |
| Dutch   | SD-260SH |
| Spanish | SD-260SS |
| Italian | SD-260SI |

## 5. Supply parts

### SD-2060 SUPPLIES LIST (SEC)

| No. | ITEM                  | CONTENTS                                                                                                                                               | LIFE               | MODEL NAME | Packing Unit | REMARK                                                                    |
|-----|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------|--------------|---------------------------------------------------------------------------|
| 1   | Drum                  | OPC Drum x 1                                                                                                                                           | 250K               | SD-360DR   | 6            |                                                                           |
| 2   | Developer             | Developer (1.0Kg) x10                                                                                                                                  | 250K ( x 5 )       | SD-360MD   | 1            | Two packs should be changed in replacement.<br>(SD-360ND) x 10 = SD-360MD |
| 3   | Toner                 | Toner Cartridge (0.93Kg) x10                                                                                                                           | 28K ( x 10)        | SD-360MT   | 1            | (SD-360NT) x 10 = SD-360MT                                                |
| 4   | Upper Heat Roller Kit | Upper Heat Roller x 1<br>Upper Separation Pawl x 4                                                                                                     | 500K               | SD-360UH   | 5            |                                                                           |
| 5   | Lower Heat Roller Kit | Lower Heat Roller x 1<br>Lower Separation Pawl x 4                                                                                                     | 250K               | SD-360LH   | 5            |                                                                           |
| 6   | Cleaner Blade         | Cleaner Blade x 10                                                                                                                                     | 125K ( x 10)       | SD-360CB   | 1            |                                                                           |
| 7   | Upper Cleaning Roller | Upper Cleaning Roller x 10                                                                                                                             | 125K ( x 10)       | SD-360UR   | 1            |                                                                           |
| 8   | Lower Cleaning Roller | Lower Cleaning Roller x 10                                                                                                                             | 125K ( x 10)       | SD-360LR   | 1            |                                                                           |
| 9   | Waste Toner Bottle    | Waste Toner Bottle x 1                                                                                                                                 | 125K               | SD-360TB   | 5            |                                                                           |
| 10  | Staple Cartridge      | Staple Cartridge x 5                                                                                                                                   | 5000Staple ( x 5 ) | SD-LS20    | 10           | For SD-2075/3075, SF-S53<br>(SD-SC20) x 5 = SD-LS20                       |
| 11  | Convenience Parts Kit | 360CP x 5<br>(Drum Separation Pawl x 2)<br>(Charging Plate Unit x 1)<br>(CL Side Seal F/R x 1)<br>(DV Side Seal F/R x 1)<br>(Toner Receiving Seal x 1) | 250K               | SD-360CK   | 1            | (360CP) x 5 = 360CK)                                                      |

※ The waste toner bottle (1 pc/125K), the screen grid (250K), the charger wire (250K), the ozone filter (500K), the DV seal (500K), and the CL brush roller (500K) are supplied as service parts.  
The charging plate unit (250K), the drum separation pawl (250K), and the toner receiving seal (250K) are provided as service parts though they are sales items.

### SD-2060 SUPPLIES LIST (SECL)

| No. | ITEM                  | CONTENTS                                                                                                                        | LIFE               | MODEL NAME | Packing Unit | REMARK                                                                    |
|-----|-----------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------|------------|--------------|---------------------------------------------------------------------------|
| 1   | Drum                  | OPC Drum x 1                                                                                                                    | 250K               | SD-360DR   | 6            |                                                                           |
| 2   | Developer             | Developer (1.0Kg) x10                                                                                                           | 250K ( x 5 )       | SD-360MD   | 1            | Two packs should be changed in replacement.<br>(SD-360ND) x 10 = SD-360MD |
| 3   | Toner                 | Toner Cartridge (0.93Kg) x10                                                                                                    | 28K ( x 10)        | SD-360MT   | 1            | (SD-360NT) x 10 = SD-360MT                                                |
| 4   | Upper Heat Roller Kit | Upper Heat Roller x 1<br>Upper Separation Pawl x 4                                                                              | 500K               | SD-360UH   | 5            |                                                                           |
| 5   | Lower Heat Roller Kit | Lower Heat Roller x 1<br>Lower Separation Pawl x 4                                                                              | 250K               | SD-360LH   | 5            |                                                                           |
| 6   | 125K Maintenance Kit  | Cleaner Blade x 10<br>Waste Toner Bottle<br>Upper Cleaning Roller<br>Lower Cleaning Roller                                      | 125K               | SD-360KA   | 5            |                                                                           |
| 7   | 250K Maintenance Kit  | Drum Separation Pawl x 2<br>Charging Plate Unit x 1<br>Toner Receiving Seal x 1<br>DV Side Seal F/R x 1<br>CL Side Seal F/R x 1 | 250K               | SD-360KB   | 5            |                                                                           |
| 8   | Staple Cartridge      | Staple Cartridge x 5                                                                                                            | 5000Staple ( x 5 ) | SD-LS20    | 10           | For SD-2075/3075, SF-S53<br>(SD-SC20) x 5 = SD-LS20                       |

## SD-2060 SUPPLIES LIST (SEEG, SUK)

| No. | ITEM                  | CONTENTS                                                                                                                        | LIFE               | MODEL NAME | Packing Unit | EAN NUMBER                                 | REMARK                                                                     |
|-----|-----------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------|------------|--------------|--------------------------------------------|----------------------------------------------------------------------------|
| 1   | Drum                  | OPC Drum x 1                                                                                                                    | 250K               | SD-360DR   | 6            | 49 74019 05178 9                           |                                                                            |
| 2   | Developer             | Developer (1.0Kg) x 10                                                                                                          | 250K ( x 5 )       | SD-360MD   | 1            | 49 74019 05179 6<br>(49 74019 051857 x 10) | Two packs should be changed in replacement.<br>(SD-360DV) x 10 = SD-360LD) |
| 3   | Toner                 | Toner Cartridge (0.93Kg) x 10                                                                                                   | 28K ( x 10 )       | SD-360MT   | 1            | 49 74019 05189 2<br>(49 74019 051864 x 10) | (SD-360T) x 10 = SD-360LT)                                                 |
| 4   | Upper Heat Roller Kit | Upper Heat Roller x 1<br>Upper Separation Pawl x 4                                                                              | 500K               | SD-360UH   | 5            | 49 74019 05181 9                           |                                                                            |
| 5   | Lower Heat Roller Kit | Lower Heat Roller x 1<br>Lower Separation Pawl x 4                                                                              | 250K               | SD-360LH   | 5            | 49 74019 05182 6                           |                                                                            |
| 6   | 125K Maintenance Kit  | Cleaner Blade x 1<br>Waste Toner Bottle x 1<br>Upper Cleaning Roller x 1<br>Lower Cleaning Roller x 1                           | 125K               | SD-360KA   | 5            | 49 74019 05183 3                           |                                                                            |
| 7   | 250K Maintenance Kit  | Drum Separation Pawl x 2<br>Charging Plate Unit x 1<br>Toner Receiving Seal x 1<br>DV Side Seal F/R x 1<br>CL Side Seal F/R x 1 | 250K               | SD-360KB   | 5            | 49 74019 05184 0                           |                                                                            |
| 8   | Staple Cartridge      | Staple Cartridge x 5                                                                                                            | 5000Staple ( x 5 ) | SD-LS20    | 10           |                                            | For SD-2075/3076, SF-S53<br>(SD-SC20) x 5 = SD-LS20                        |

## SD-2060 SUPPLIES LIST (Asia, Latin America)

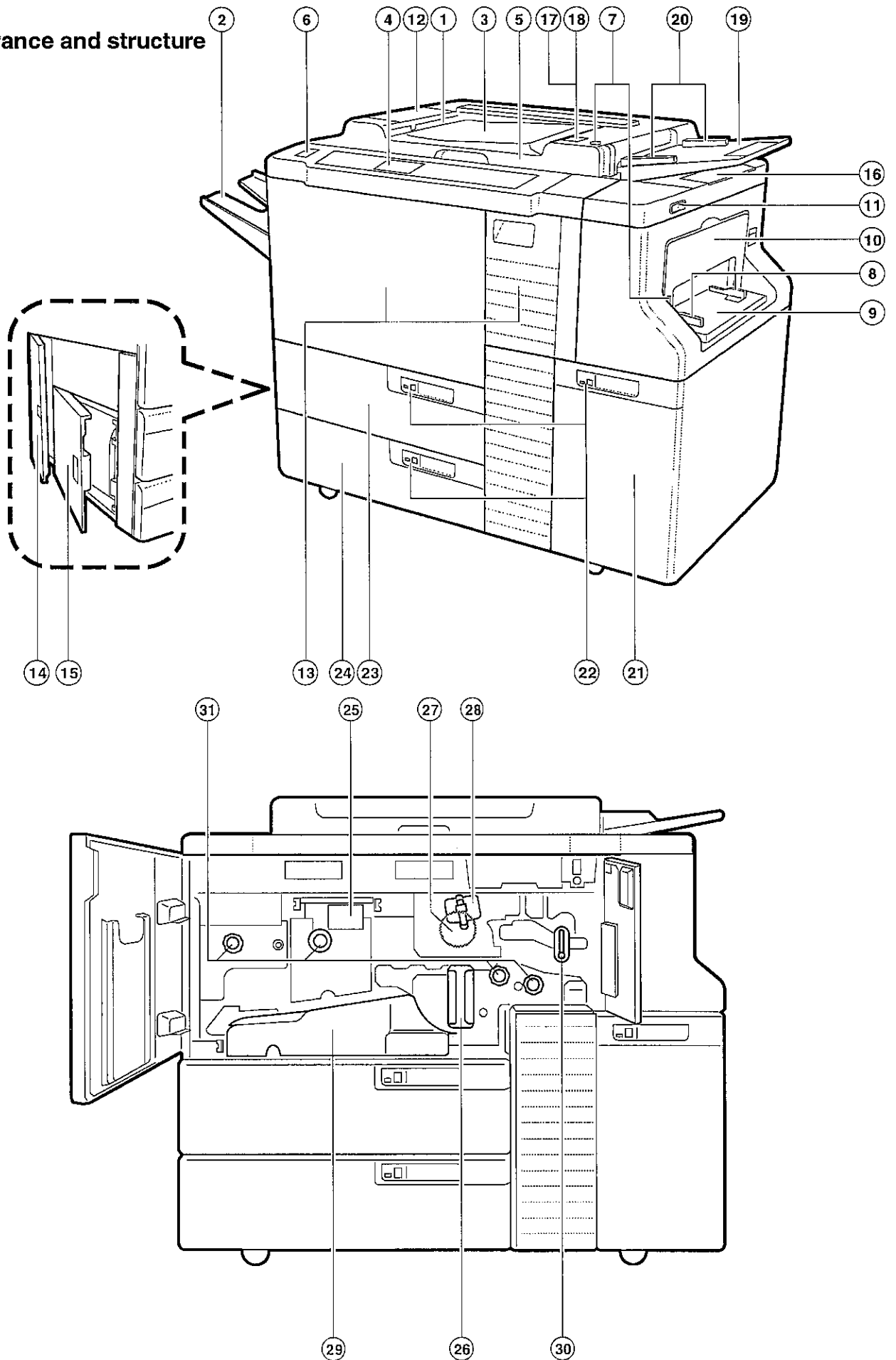
| No. | ITEM                  | CONTENTS                                                                                                                        | LIFE               | MODEL NAME | Packing Unit | REMARK                                                                    |
|-----|-----------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------|------------|--------------|---------------------------------------------------------------------------|
| 1   | Drum                  | OPC Drum x 1                                                                                                                    | 250K               | SD-360DR   | 6            |                                                                           |
| 2   | Developer             | Developer (1.0Kg) x10                                                                                                           | 250K ( x 5 )       | SD-360CD   | 1            | Two packs should be changed in replacement.<br>(SD-360ND) x 10 = SD-360CD |
| 3   | Toner                 | Toner Cartridge (0.93Kg) x10                                                                                                    | 28K ( x 10 )       | SD-360CT   | 1            | (SD-360ST) x 10 = SD-360CT                                                |
| 4   | Upper Heat Roller Kit | Upper Heat Roller x 1<br>Upper Separation Pawl x 4                                                                              | 500K               | SD-360UH   | 5            |                                                                           |
| 5   | Lower Heat Roller Kit | Lower Heat Roller x 1<br>Lower Separation Pawl x 4                                                                              | 250K               | SD-360LH   | 5            |                                                                           |
| 6   | 125K Maintenance Kit  | Cleaner Blade x 1<br>Waste Toner Bottle x 1<br>Upper Cleaning Roller x 1<br>Lower Cleaning Roller x 1                           | 125K               | SD-360KA   | 5            |                                                                           |
| 7   | 250K Maintenance Kit  | Drum Separation Pawl x 2<br>Charging Plate Unit x 1<br>Toner Receiving Seal x 1<br>DV Side Seal F/R x 1<br>CL Side Seal F/R x 1 | 250K               | SD-360KB   | 5            |                                                                           |
| 8   | Staple Cartridge      | Staple Cartridge x 5                                                                                                            | 5000Staple ( x 5 ) | SD-LS20    | 10           | For SD-2075/3076, SF-S53<br>(SD-SC20) x 5 = SD-LS20                       |

## SD-2060 SUPPLIES LIST (SCA, SCNZ, Middle East, Africa))

| No. | ITEM                  | CONTENTS                                                                                                                        | LIFE               | MODEL NAME | Packing Unit | REMARK                                                                    |
|-----|-----------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------|------------|--------------|---------------------------------------------------------------------------|
| 1   | Drum                  | OPC Drum x 1                                                                                                                    | 250K               | SD-360DM   | 6            |                                                                           |
| 2   | Developer             | Developer (1.0Kg ) x10                                                                                                          | 250K ( x 5 )       | SD-360LD   | 1            | Two packs should be changed in replacement.<br>(SD-360DV) x 10 = SD-360LD |
| 3   | Toner                 | Toner Cartridge (0.93Kg ) x10                                                                                                   | 28K ( x 10)        | SD-360LT   | 1            | (SD-360T) x 10 = SD-360LT                                                 |
| 4   | Upper Heat Roller Kit | Upper Heat Roller x 1<br>Upper Separation Pawl x 4                                                                              | 500K               | SD-360UH   | 5            |                                                                           |
| 5   | Lower Heat Roller Kit | Lower Heat Roller x 1<br>Lower Separation Pawl x 4                                                                              | 250K               | SD-360LH   | 5            |                                                                           |
| 6   | 125K Maintenance Kit  | Cleaner Blade x 1<br>Waste Toner Bottle x 1<br>Upper Cleaning Roller x 1<br>Lower Cleaning Roller x 1                           | 125K               | SD-360KA   | 5            |                                                                           |
| 7   | 250K Maintenance Kit  | Drum Separation Pawl x 2<br>Charging Plate Unit x 1<br>Toner Receiving Seal x 1<br>DV Side Seal F/R x 1<br>CL Side Seal F/R x 1 | 250K               | SD-360KB   | 5            |                                                                           |
| 8   | Staple Cartridge      | Staple Cartridge x 5                                                                                                            | 5000Staple ( x 5 ) | SD-LS20    | 10           | For SD-2075/3076, SF-S53<br>(SD-SC20) x 5 = SD-LS20                       |

### [3] PRODUCT OUTLINE

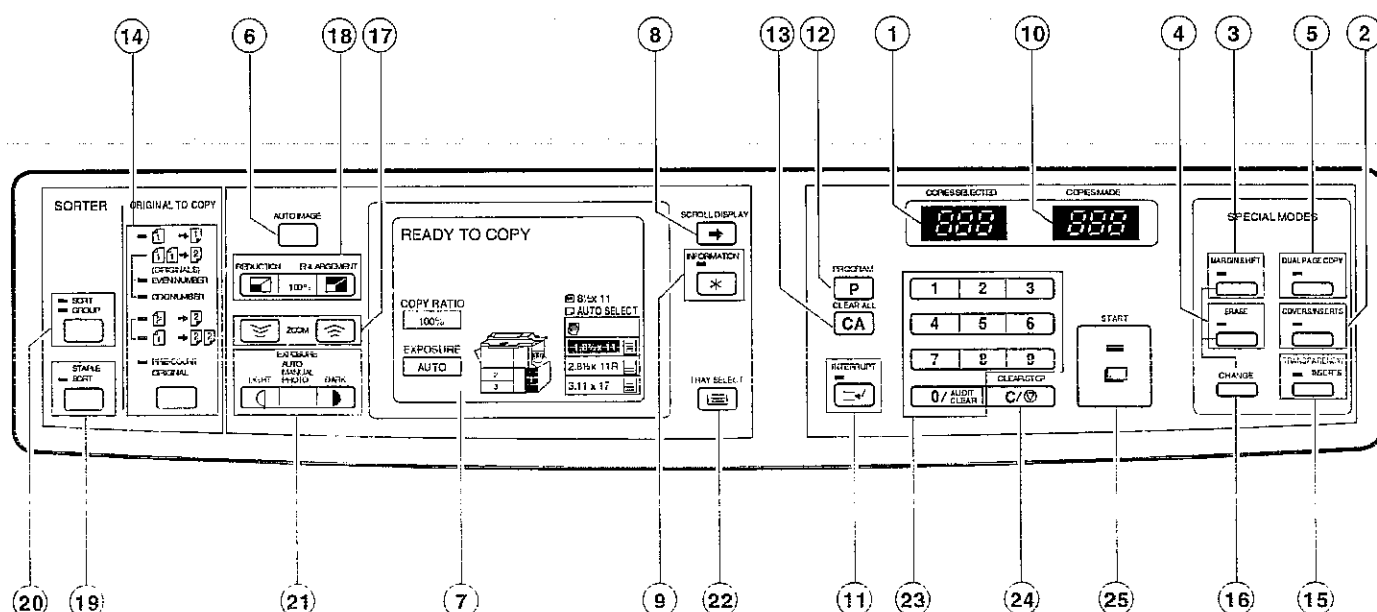
#### 1. Appearance and structure



## Appearance and structure

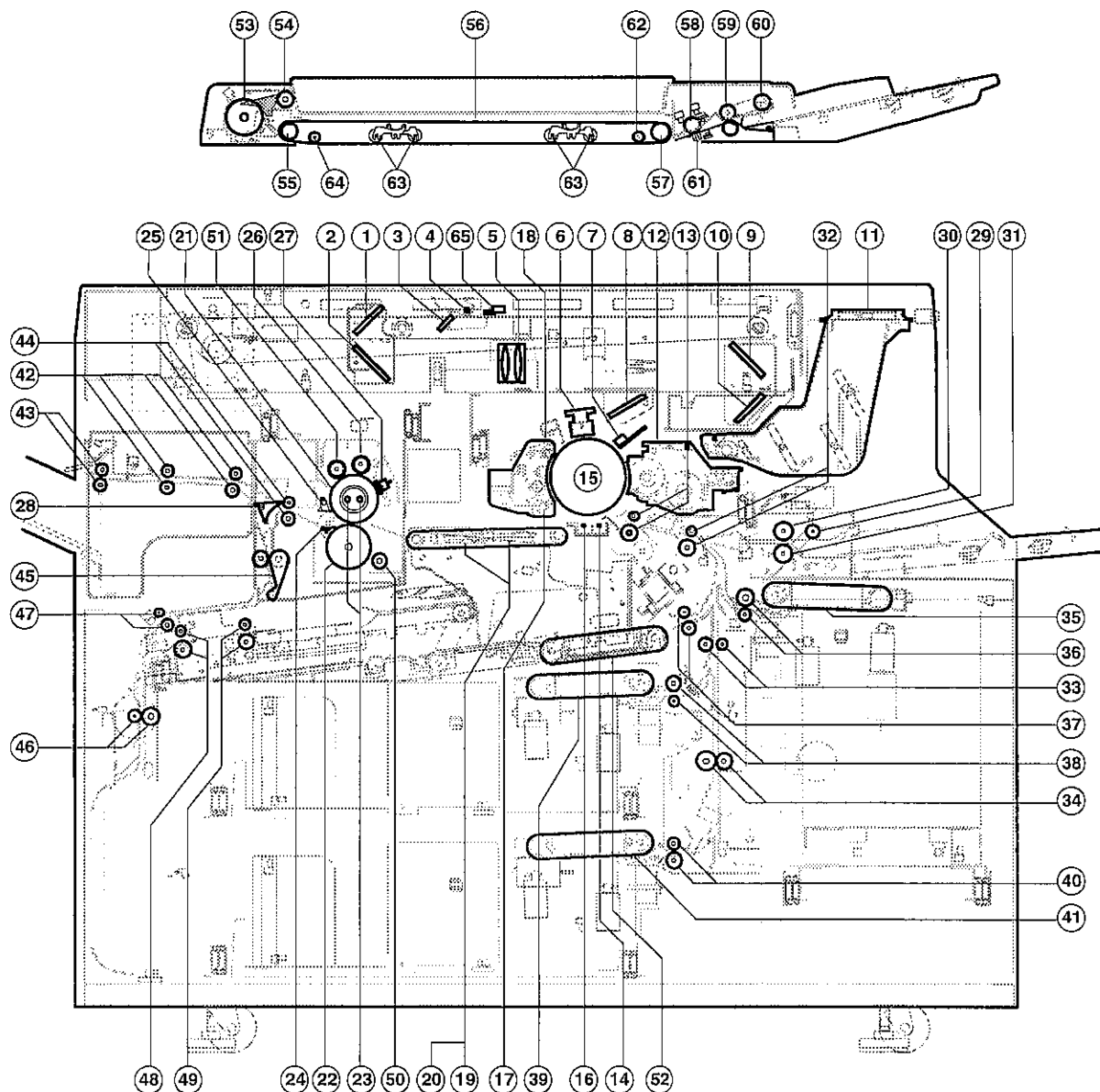
|   |                                                |   |                                    |   |                               |
|---|------------------------------------------------|---|------------------------------------|---|-------------------------------|
| ① | Original stacker                               | ② | Copy reception tray                | ③ | RADF                          |
| ④ | Operation panel                                | ⑤ | Original table                     | ⑥ | Clip tray                     |
| ⑦ | Paper feed pressure release button (Body/RADF) | ⑧ | Manual paper feed guide            | ⑨ | Manual paper feed tray        |
| ⑩ | Auxiliary tray                                 | ⑪ | Power switch                       | ⑫ | Original exit section cover   |
| ⑬ | Front cover                                    | ⑭ | Toner collection container section | ⑮ | Left side cover               |
| ⑯ | Toner box                                      | ⑰ | Original alarm lamp                | ⑱ | Original feed display lamp    |
| ⑲ | Original set table                             | ⑳ | Original guide                     | ㉑ | Paper feed tray 1             |
| ㉒ | Paper feed tray descending button/lamp         | ㉓ | Paper feed tray 2                  | ㉔ | Paper feed tray 3             |
| ㉕ | Fusing section                                 | ㉖ | Transport section open/close lever | ㉗ | Photoconductor drum           |
| ㉘ | Main Charger                                   | ㉙ | Duplex tray section                | ㉚ | Developer unit and lock lever |
| ㉛ | Roller rotation knob                           |   |                                    |   |                               |

## 2. Operation panel



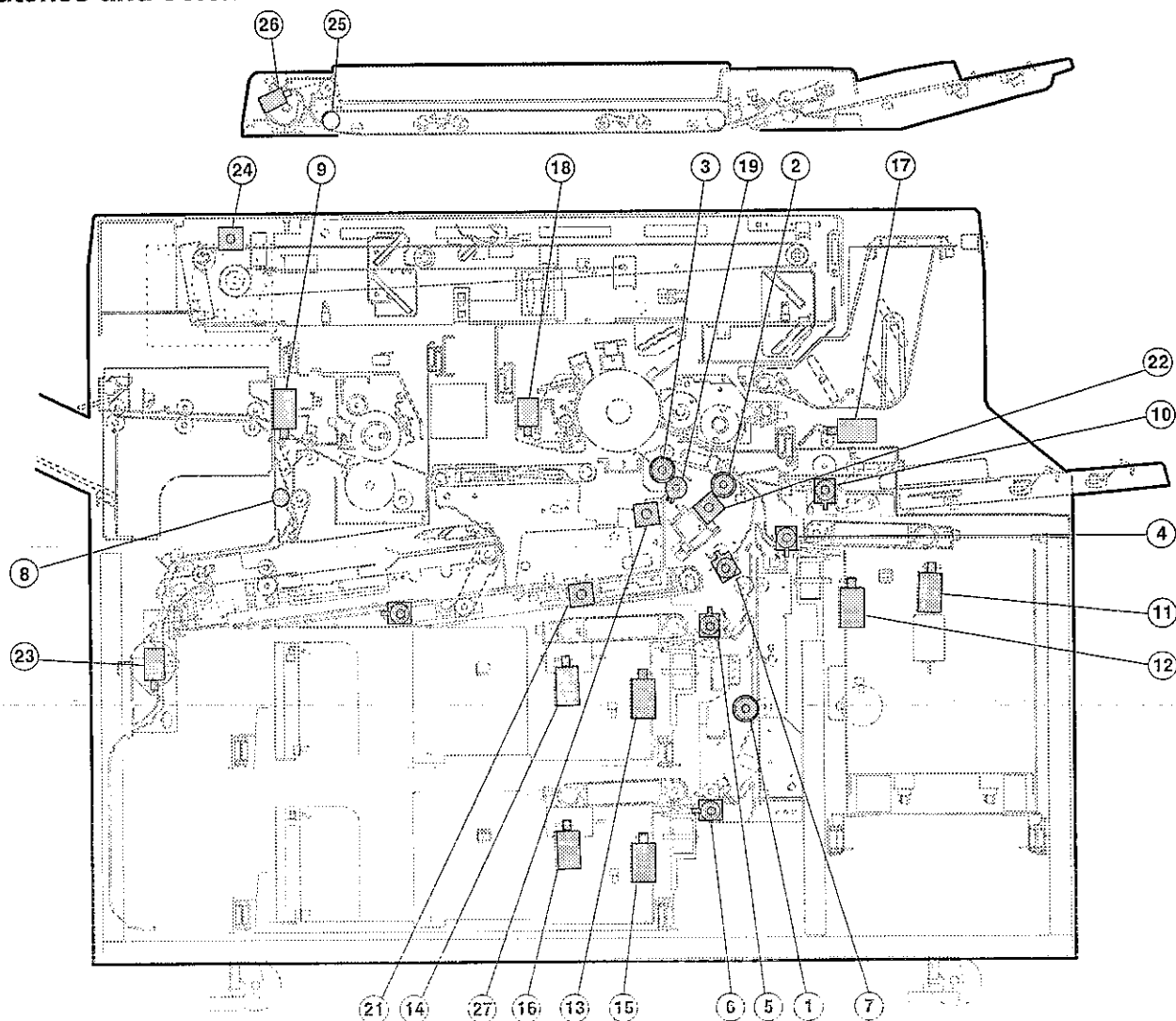
|   |                               |   |                                     |   |                                        |
|---|-------------------------------|---|-------------------------------------|---|----------------------------------------|
| ① | Copies selected display       | ② | Covers/Inserts key and indicator    | ③ | Margin shift key and indicator         |
| ④ | Erase key and indicator       | ⑤ | Dual page copy key and indicator    | ⑥ | Auto Image key                         |
| ⑦ | Message display               | ⑧ | Scroll display key                  | ⑨ | Information key and indicator          |
| ⑩ | Copies made display           | ⑪ | Interrupt key and indicator         | ⑫ | Program (P) key                        |
| ⑬ | Clear all (CA) key            | ⑬ | Original to copy key and indicators | ⑮ | Transparency inserts key and indicator |
| ⑯ | Change key                    | ⑰ | Zoom keys                           | ⑰ | Reduction, 100% and enlargement keys   |
| ⑲ | Staple sort key and indicator | ⑳ | Sort/Group key and indicators       | ㉑ | Exposure keys                          |
| ㉒ | Tray select key               | ㉓ | 10-Key pad                          | ㉔ | Clear/stop key                         |
| ㉕ | Start key and indicator       |   |                                     |   |                                        |

### 3. Internal structure



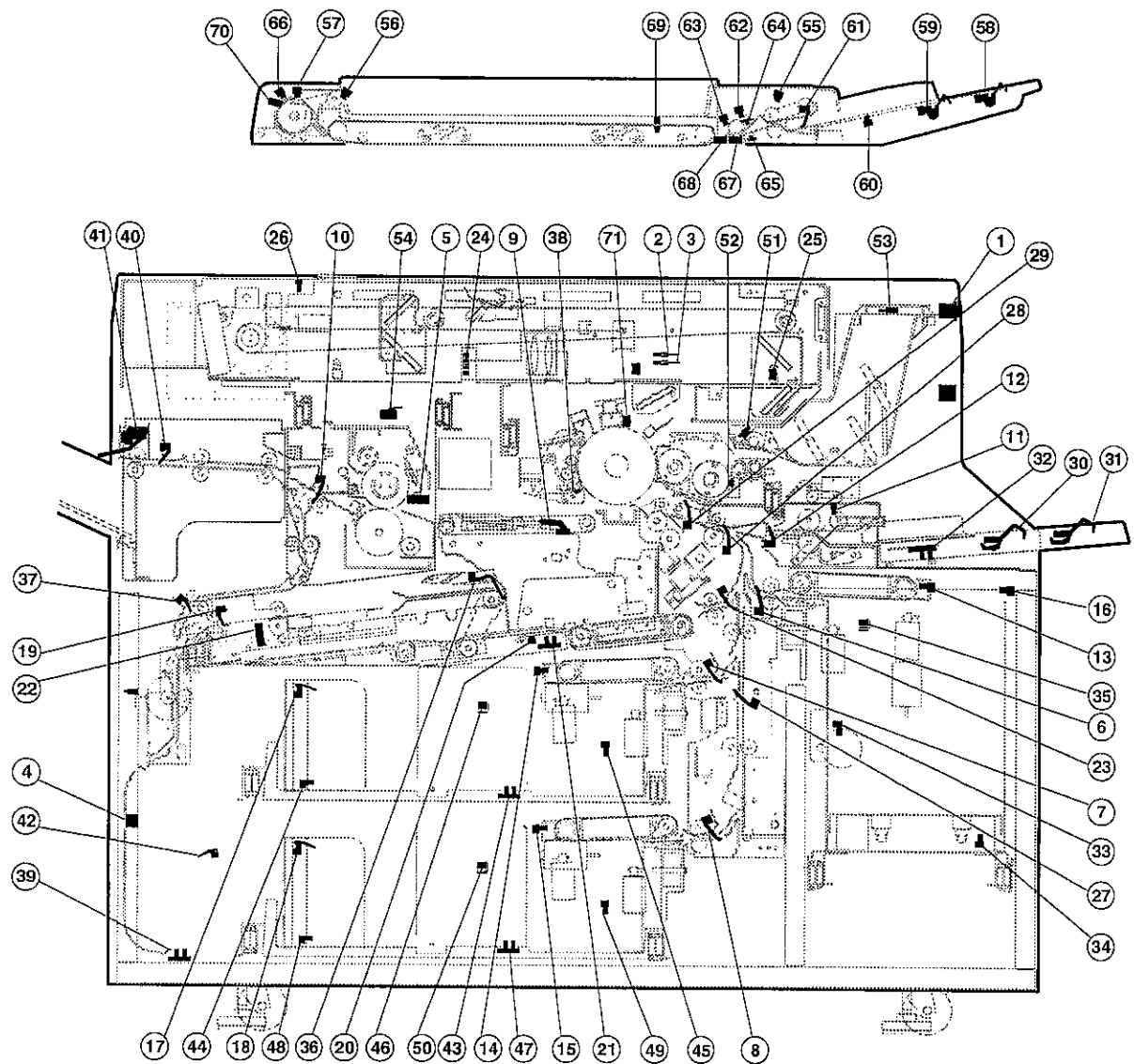
|                                          |                                          |                                         |
|------------------------------------------|------------------------------------------|-----------------------------------------|
| ① No. 2 mirror                           | ② No. 3 mirror                           | ③ No. 1 mirror                          |
| ④ Copy lamp                              | ⑤ Lens unit                              | ⑥ Main charger unit                     |
| ⑦ Blank lamp                             | ⑧ No. 6 mirror                           | ⑨ No. 4 mirror                          |
| ⑩ No. 5 mirror                           | ⑪ Toner hopper                           | ⑫ Developer unit                        |
| ⑬ Resist roller                          | ⑭ Transfer charger                       | ⑮ Photoconductor drum                   |
| ⑯ Separation charger                     | ⑰ Drum separation pawl                   | ⑱ Cleaner unit                          |
| ⑲ Suction unit                           | ⑳ Suction belt                           | ㉑ Upper heat roller                     |
| ㉒ Lower heat roller                      | ㉓ Heater lamps                           | ㉔ Lower separation pawl                 |
| ㉕ Upper separation pawl                  | ㉖ Sub cleaning roller                    | ㉗ Fuser thermistor/thermostat           |
| ㉘ Paper exit separation gate             | ㉙ Manual feed takeup roller              | ㉚ Manual paper feed roller              |
| ㉛ Manual feed separation roller          | ㉜ Transport roller                       | ㉝ Transport roller                      |
| ㉞ Transport roller                       | ㉟ 2000-sheet tray paper feed belt        | ㊱ 2000-sheet tray transport roller      |
| ㊲ Duplex copy tray transport roller      | ㊳ Upper 1000-sheet tray transport roller | ㊴ Upper 1000-sheet tray paper feed belt |
| ㊵ Lower 1000-sheet tray transport roller | ㊶ Lower 1000-sheet tray paper feed belt  | ㊷ Paper exit transport roller           |
| ㊸ Paper exit transport roller            | ㊹ Fuser transport roller                 | ㊺ Decurling belt                        |
| ㊻ Reverse section transport roller       | ㊼ Reverse section transport roller       | ㊽ Duplex copy tray transport roller     |
| ㊾ Duplex copy tray transport roller      | ㊿ Lower cleaning roller                  | ㋀ Upper cleaning roller                 |
| ㋁ Duplex copy tray paper feed belt       | ㋂ Lower cleaning roller                  | ㋃ Paper exit roller                     |
| ㋄ RADF Belt drive roller                 | ㋅ RADF transport belt                    | ㋆ RADF Belt follower roller             |
| ㋇ RADF resist roller A                   | ㋈ RADF paper feed roller                 | ㋉ RADF takeup roller                    |
| ㋊ RADF resist roller B                   | ㋋ RADF Belt tension roller A             | ㋌ RADF Belt tension roller B            |
| ㋍ RADF Belt tension roller C             | ㋎ AE sensor                              |                                         |

## 4. Clutches and solenoids



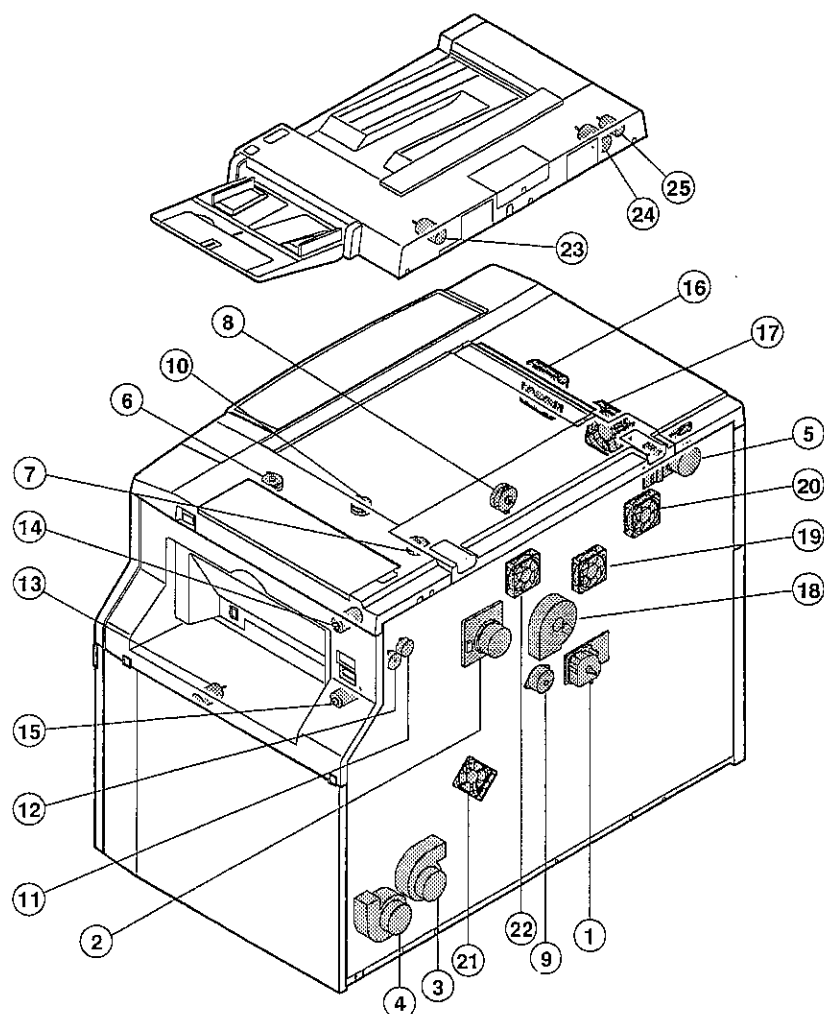
|   | Signal name | Name                                         | Function and operation                                    |
|---|-------------|----------------------------------------------|-----------------------------------------------------------|
| ① | TRC1        | Transport roller clutch 1                    | Transport roller (paper feed tray) rotation               |
| ② | TRC2        | Transport roller clutch 2                    | Transport roller (in front of the resist roller) rotation |
| ③ | RRC         | Resist roller clutch                         | Resist roller rotation                                    |
| ④ | TBC1        | Paper feed belt clutch 1                     | 2000-sheet tray paper feed belt rotation                  |
| ⑤ | TBC2        | Paper feed belt clutch 2                     | Upper 1000-sheet tray paper feed belt rotation            |
| ⑥ | TBC3        | Paper feed belt clutch 3                     | Lower 1000-sheet tray paper feed belt rotation            |
| ⑦ | DBC         | Duplex copy paper feed belt clutch           | Duplex copy tray paper feed belt rotation                 |
| ⑧ | DTRC        | Duplex copy transport roller clutch          | Duplex copy tray transport roller rotation                |
| ⑨ | DGS1        | Paper exit/reverse select solenoid 1         | Paper exit/reverse select gate ON/OFF                     |
| ⑩ | MPFC        | Manual paper feed clutch                     | Multi-copy manual paper feed roller rotation              |
| ⑪ | TVVS1       | Paper feed suction valve solenoid 1          | 2000-sheet tray paper feed suction valve open/close       |
| ⑫ | TBVS1       | Paper feed blower valve solenoid 1           | 2000-sheet tray paper feed blower valve open/close        |
| ⑬ | TVVS2       | Paper feed suction valve solenoid 2          | Upper 1000-sheet tray paper feed suction valve open/close |
| ⑭ | TBVS2       | Paper feed blower valve solenoid 2           | Upper 1000-sheet tray paper feed blower valve open/close  |
| ⑮ | TVVS3       | Paper feed suction valve solenoid 3          | Lower 1000-sheet tray paper feed suction valve open/close |
| ⑯ | TBVS3       | Paper feed blower valve solenoid 3           | Lower 1000-sheet tray paper feed blower valve open/close  |
| ⑰ | MPFS        | Manual paper feed solenoid                   | Multi-copy paper feed takeover roller pressing            |
| ⑱ | PSPS        | Drum separation pawl solenoid                | Drum separation pawl pressing                             |
| ⑲ | PSBRK       | Transport brake clutch                       | Paper feed transport brake ON/OFF                         |
| ⑳ | DVVS        | Duplex copy suction valve solenoid           | Duplex copy tray suction valve open/close                 |
| ㉑ | DBVS        | Duplex copy blower valve solenoid            | Duplex copy tray blower valve open/close                  |
| ㉒ | DGS2        | Duplex copy reverse gate solenoid 2          | Duplex copy/reverse select gate ON/OFF                    |
| ㉓ | DSS         | Original stopper solenoid                    | Original stopper ON/OFF                                   |
| ㉔ | DTB         | (RADF) original transport brake clutch       | (RADF) original transport brake ON/OFF                    |
| ㉕ | DRSOL       | (RADF) original reverse gate solenoid        | (RADF) original reverse gate ON/OFF                       |
| ㉖ | DFSS        | Duplex copy paper lead edge stopper solenoid | Duplex copy paper lead edge stopper ON/OFF                |

## 5. Sensors



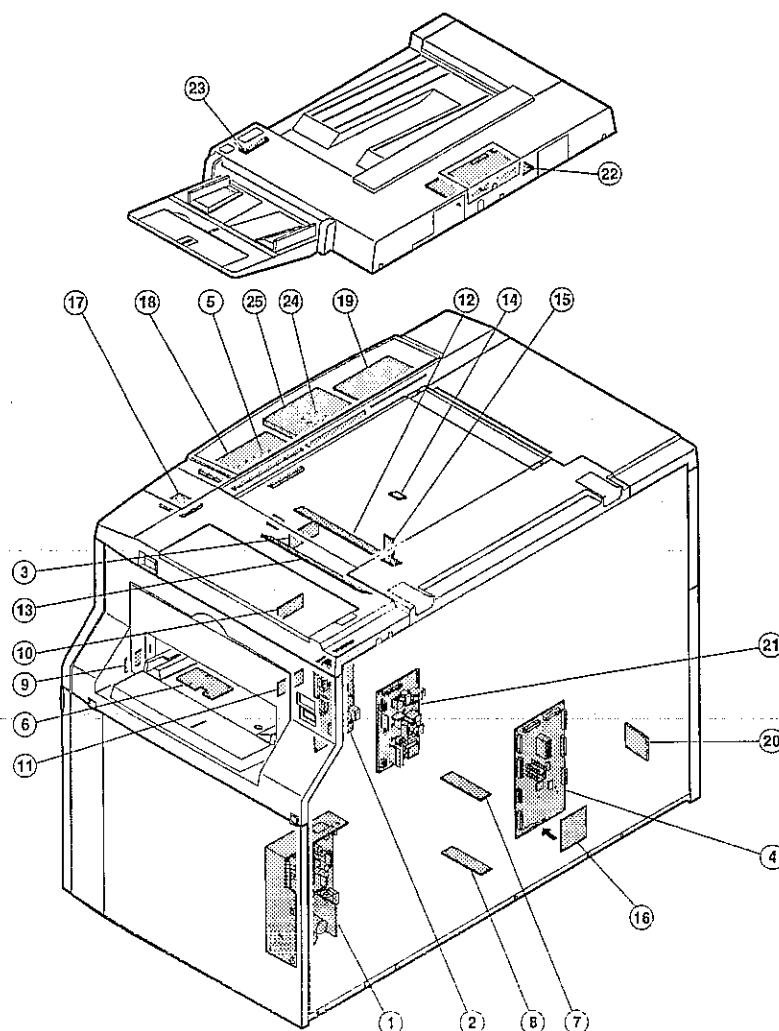
|   | Signal name | Name                                              | Function and operation                                                                                              |
|---|-------------|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| ① | MSW         | AC power switch                                   | For turning ON/OFF the AC power switch.                                                                             |
| ② | DSW1        | Door switch 1                                     | For 38V line. L4 display at OFF.                                                                                    |
| ③ | DSW2        | Door switch 2                                     | For 24V line. CH display at OFF.                                                                                    |
| ④ | DDSW        | Duplex copy tray switch                           | Duplex copy reversing section door switch                                                                           |
| ⑤ | HL ILSW     | Fuser interlock switch                            | For the heater lamp power line.                                                                                     |
| ⑥ | PFD1        | Paper feed sensor 1                               | For detection of paper entry from paper feed tray 1                                                                 |
| ⑦ | PFD2        | Paper feed sensor 2                               | For detection of paper entry from paper feed tray 2                                                                 |
| ⑧ | PFD3        | Paper feed sensor 3                               | For detection of paper entry from paper feed tray 3                                                                 |
| ⑨ | PSD         | Paper separation sensor                           | For detection of paper transport after transfer and separation in the process section                               |
| ⑩ | POD         | Paper exit sensor                                 | For detection of paper transport after fusing                                                                       |
| ⑪ | MPED        | Manual feed paper empty sensor                    | For detection of paper presence in the manual feed section                                                          |
| ⑫ | MPFD        | Manual paper feed sensor                          | For detection of paper entry in the manual feed section                                                             |
| ⑬ | TLMD1       | Paper feed tray upper limit sensor 1              | For detection of the upper limit of the paper feed tray 1                                                           |
| ⑭ | TLMD2       | Paper feed tray upper limit sensor 2              | For detection of the upper limit of the paper feed tray 2                                                           |
| ⑮ | TLMD3       | Paper feed tray upper limit sensor 3              | For detection of the upper limit of the paper feed tray 3                                                           |
| ⑯ | TUD1        | Paper feed tray rising sensor 1                   | For detection of the upper limit of paper in the paper feed tray 1                                                  |
| ⑰ | TUD2        | Paper feed tray rising sensor 2                   | For detection of the upper limit of paper in the paper feed tray 2                                                  |
| ⑱ | TUD3        | Paper feed tray rising sensor 3                   | For detection of the upper limit of paper in the paper feed tray 3                                                  |
| ⑲ | DPPD        | Duplex copy tray paper transport sensor           | For detection of paper entry from the switchback unit                                                               |
| ⑳ | DTPD        | Duplex copy tray paper sensor                     | For detection of paper presence in the duplex copy tray                                                             |
| ㉑ | DTW HPS     | Duplex copy tray width guide home position sensor | For detection of duplex copy tray paper width guide home position                                                   |
| ㉒ | DTBHPS      | Duplex copy tray rear edge guide home sensor      | For detection of duplex copy tray rear edge guide home position                                                     |
| ㉓ | DPFD        | Duplex copy tray paper feed sensor                | For detection of paper entry from duplex copy tray                                                                  |
| ㉔ | LHP         | Lens home sensor                                  | For detection of lens home position                                                                                 |
| ㉕ | MBHP        | No. 4/No. 5 mirror home sensor                    | For detection of No. 4/No. 5 mirror home position                                                                   |
| ㉖ | MHP         | No. 2/No. 3 mirror home sensor                    | For detection of No. 2/No. 3 mirror home position                                                                   |
| ㉗ | PPD1        | Paper transport sensor 1                          | For detection of paper transport from paper feed tray 3                                                             |
| ㉘ | PPD2        | Paper transport sensor 2                          | For detection of paper transport from each paper feed unit                                                          |
| ㉙ | PPD3        | Paper transport sensor 3                          | For detection of paper in front of the resist roller                                                                |
| ㉚ | MPSD1       | Manual feed tray paper size sensor                | For detection of manual feed paper length                                                                           |
| ㉛ | MPSD2       | Manual feed tray paper size sensor                | For detection of manual feed paper length                                                                           |
| ㉜ | MDOP        | Manual feed tray open/close sensor                |                                                                                                                     |
| ㉝ | TPTD1       | Paper feed tray PT sensor 1                       | For detection of paper feed tray 1 lift motor rotation (Remaining paper quantity display)                           |
| ㉞ | TLD1        | Paper feed tray lower limit sensor 1              | For detection of the lower limit of paper feed tray 1                                                               |
| ㉟ | TSW1        | Paper feed tray switch 1                          | Paper feed tray 1 ON: Paper present, OFF: Paper empty, Blink: Tray is rising or descending.                         |
| ㊱ | DPID        | Duplex copy tray paper entry sensor               | For detection of paper entry to the duplex copy tray                                                                |
| ㊲ | DSBD        | Reverse unit paper entry sensor                   | For detection of paper entry to the reverse unit                                                                    |
| ㊳ | PCS         | Process control sensor                            | Reads patch density on the photoconductor surface.                                                                  |
| ㊴ | TNF         | Waste toner full sensor                           | For detection of waste toner full                                                                                   |
| ㊵ | POD2        | Paper exit sensor 2                               | For detection of paper exit                                                                                         |
| ㊶ | IFD         | Copy reception tray full sensor                   | When tray full is detected, the machine will halt after completion of the current copy cycle.                       |
| ㊷ | TB BOX      | Waste toner bottle sensor                         | For detection of waste toner bottle.                                                                                |
| ㊸ | PS21-26     | Paper feed tray paper size sensor (in PWB)        | Paper size is judged by resistance value on the PWB.                                                                |
| ㊹ | TLD2        | Paper feed tray lower limit sensor 2              | For detection of the lower limit of paper feed tray 2                                                               |
| ㊺ | TPTD2       | Paper feed tray PT sensor                         | For detection of paper feed tray 2 lift motor rotation (Remaining paper quantity is displayed.)                     |
| ㊻ | TSW2        | Paper feed tray switch 2                          | Paper feed tray 2 ON: paper present, OFF: paper empty, Blink: Tray is rising or descending.                         |
| ㊼ | PS31-36     | Paper feed tray paper size sensor (in PWB)        | Paper size is judged by resistance value on the PWB.                                                                |
| ㊽ | TLD3        | Paper feed tray lower limit sensor 3              | For detection of the lower limit of paper feed tray 3                                                               |
| ㊾ | TPTD3       | Paper feed tray PT sensor 3                       | For detection of paper feed tray 3 lift motor rotation (Remaining paper quantity is displayed.)                     |
| ㊿ | TSW3        | Paper feed tray switch 3                          | Paper feed tray 3 ON: paper present, OFF: paper empty, Blink: Tray is rising or descending.                         |
| ① | TES         | Toner empty sensor                                | For detection of remaining toner quantity in the toner hopper                                                       |
| ② | TNCS        | Toner density sensor                              | For detection of toner density in the developer                                                                     |
| ③ | TNCTR       | Toner cartridge switch                            | For detection of hopper cover open when supplying toner                                                             |
| ④ | FUSUR       | Fuser unit installation sense switch              | As the fuser unit lock is released, HL power supply line is turned off.                                             |
| ⑤ | DFMRS       | Original paper feed motor rotation sensor         | For detection of original paper feed (A) motor rotation                                                             |
| ⑥ | DTMRS       | Original transport motor rotation sensor          | For detection of original feed (B) motor rotation                                                                   |
| ⑦ | DEMRS       | Original exit reverse motor rotation sensor       | For detection of original exit reverse (C) motor rotation                                                           |
| ⑧ | DLS1        | Original length sensor 1                          | For detection of original length (on the tray)                                                                      |
| ⑨ | DLS2        | Original length sensor 2                          | For detection of original length (on the tray)                                                                      |
| ⑩ | DWD         | Original width sensor                             | For detection of original width (Judged from resistance value of VR.)                                               |
| ⑪ | DSD         | Original set sensor                               | For detection of original set                                                                                       |
| ⑫ | DRS         | Original resist sensor                            |                                                                                                                     |
| ⑬ | DTs         | Original timing sensor                            |                                                                                                                     |
| ⑭ | DWLS        | Original length sensor (light emitting)           | When originals of a same width are fed at random, the original length is detected by the light interruption sensor. |
| ⑮ | DWRS        | Original length sensor (Light receiving)          |                                                                                                                     |
| ⑯ | RDD         | Original exit reverse sensor                      | For detection of an original                                                                                        |
| ⑰ | SSW         | Stream mode switch                                | SADF/ADF specifications mode select switch                                                                          |
| ⑱ | TPSW        | Thin paper mode switch                            | Thin paper mode/normal paper mode select switch                                                                     |
| ⑲ | AUOD        | ADF open/close switch                             | For detection of ADF unit open/close                                                                                |
| ㉑ | TGOD        | Reverse guide open/close switch                   | For detection of reverse section open/close                                                                         |
| ㉒ | DMS         | Drum marking sensor                               | For positioning of patch formation in the process control operation                                                 |

## 6. Motors



|   | Signal name | Name                              | Function and operation                                      | Type           |
|---|-------------|-----------------------------------|-------------------------------------------------------------|----------------|
| ① | MM          | Main motor                        | Drives the main body.                                       | DC brushless   |
| ② | DM          | Drum motor                        | Drives and rotates the photoconductor drum.                 | DC brushless   |
| ③ | TBFM        | Paper feed blower fan motor       | Prevents against double paper feed                          | DC brushless   |
| ④ | TVFM        | Paper feed suction fan motor      | Suction for paper transport                                 | DC brushless   |
| ⑤ | MIRM        | Mirror motor                      | For mirror base scanning                                    | DC brushless   |
| ⑥ | LM          | Lens motor                        | Shifts the lens base.                                       | DC stepping    |
| ⑦ | MBM         | Mirror base motor                 | Shifts No. 4/5 mirror base.                                 | DC stepping    |
| ⑧ | DSBM        | Duplex copy switchback motor      | Paper transport direction selection                         | DC stepping    |
| ⑨ | DBM         | Duplex copy rear edge guide motor | Shifts the rear edge guide plate.                           | DC stepping    |
| ⑩ | DWM         | Duplex copy alignment plate motor | Shifts the alignment plate.                                 | DC stepping    |
| ⑪ | TM1         | Toner motor 1                     | Supplies toner from the toner hopper to the developer unit. | DC synchronous |
| ⑫ | TM2         | Toner motor 2                     |                                                             |                |
| ⑬ | TLM1        | Tray lift motor 1                 | Lifts 2000-sheet paper feed tray base plate.                | DC brush       |
| ⑭ | TLM2        | Tray lift motor 2                 | Lifts 1000-sheet paper feed tray (upper) base plate.        | DC brush       |
| ⑮ | TLM3        | Tray lift motor 3                 | Lifts 1000-sheet paper feed tray (lower) base plate.        | DC brush       |
| ⑯ | CFM1        | Cooling fan motor 1               | Cools the optical section.                                  | DC brushless   |
| ⑰ | CFM2        | Cooling fan motor 2               |                                                             | DC brushless   |
| ⑱ | SFM         | Suction fan motor                 | Suction for paper transport.                                | DC brushless   |
| ⑲ | PFM         | Process fan motor                 | Ventilation around the process unit                         | DC brushless   |
| ⑳ | FFM         | Fusing fan motor                  | Ventilation around the fuser unit                           | DC brushless   |
| ㉑ | PSFM        | Power supply fan motor            | Ventilation around the power supply                         | DC brushless   |
| ㉒ | VFM         | Ventilation fan motor             | Ventilation in the optics                                   | DC brushless   |
| ㉓ | DFM         | Original feed motor (A)           | Drives the original feed section                            | DC brushless   |
| ㉔ | DTM         | Original transport motor (B)      | Transports originals.                                       | DC brushless   |
| ㉕ | DEM         | Original exit/reverse motor (C)   | Drives the original exit/reverse section.                   | DC brushless   |

## 7. PWB unit list



|   | Name                              | Country version                                     | Remark                                                         |
|---|-----------------------------------|-----------------------------------------------------|----------------------------------------------------------------|
| ① | DC power circuit PWB              | 100V/200V                                           | DC power supply                                                |
| ② | AC power circuit PWB              | Japan 15A/Japan 20A/<br>Overseas 100V/Overseas 200V | AC power input                                                 |
| ③ | Process control PWB               | 100V/200V                                           |                                                                |
| ④ | Main control PWB                  | Common                                              | Main body control                                              |
| ⑤ | Operation control PWB             | Japan/SEEG/Overseas (*)                             | Operation input, display control<br>(*)English, German, French |
| ⑥ | Manual feed paper size sensor PWB | Common                                              | Paper size sensing                                             |
| ⑦ | Paper feed tray size sensor PWB   | Japan/Overseas AB/INCH                              | Paper size sensing                                             |
| ⑧ | Paper feed tray size sensor PWB   | Japan/Overseas AB/INCH                              | Paper size sensing                                             |
| ⑨ | Paper feed tray switch PWB        | Common                                              |                                                                |
| ⑩ | Paper feed tray switch PWB        | Common                                              |                                                                |
| ⑪ | Paper feed tray switch PWB        | Common                                              |                                                                |
| ⑫ | Discharge lamp PWB                | Common                                              | Discharge lamp drive                                           |
| ⑬ | Blank lamp PWB                    | Common                                              | Blank lamp control                                             |
| ⑭ | AE sensor PWB                     | Common                                              | Original density automatic exposure sensing                    |
| ⑮ | Light quantity correction PWB     | Common                                              | Used for dirt correction                                       |
| ⑯ | Option memory PWB                 | SD-3075/3076 common                                 | For the Auditor                                                |
| ⑰ | Commander I/O PWB                 | Common                                              | For connection with the SF-EA13                                |
| ⑱ | Operation PWB 1                   | Common                                              | Operation input, display                                       |
| ⑲ | Operation PWB 2                   | Common                                              | Operation input, display                                       |
| ⑳ | Paper feed tray motor PWB         | 100V/200V                                           | Paper feed tray lift motor protection circuit                  |
| ㉑ | High voltage unit PWB             | 100V/200V                                           | Process high voltage developer bias voltage supply             |
| ㉒ | RADF control PWB                  | Common                                              | RADF control                                                   |
| ㉓ | RADF display PWB                  | Common                                              | RADF display                                                   |
| ㉔ | LCD display inverter PWB          | Common                                              | LCD display power source (for back light)                      |
| ㉕ | LCD unit PWB                      | Common                                              | Display unit                                                   |

## [4] INSTALLATION AND TRANSPORT

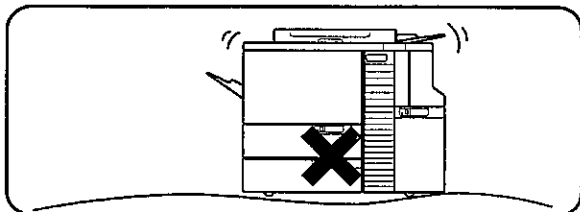
### 1. Installation conditions

The performance of the copier is affected by the surrounding conditions of the installation site. Avoid installation in the following places:

- Avoid installation on an uneven floor, an unstable surface, or a slanted surface.

To assure proper performance, the copier should be installed on a horizontal surface.

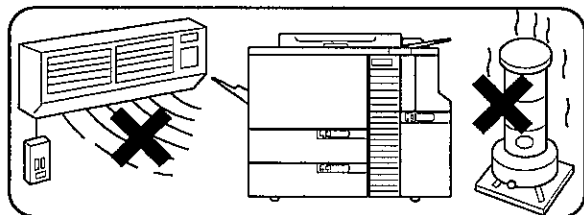
- \* The installation surface should be stable enough to support the copier weight (main body: approx. 526 lbs (239 kg)).



- Avoid installation where either the temperature or humidity is excessively high or low. (For example, near a stove, humidifier, or refrigerator.)

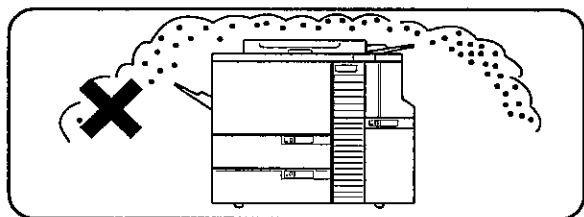
This may dampen the paper or cause condensation within the copier, resulting in paper jams or poor copy quality.

(Operating conditions: temperature 15°C ~ 30°C, humidity 20% ~ 85%)



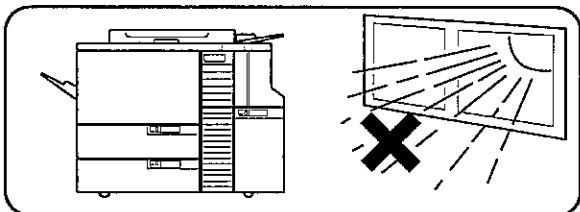
- Avoid installation in a dusty place.

If dust enters the copier machine, it may cause poor copy quality or result in improper performance.

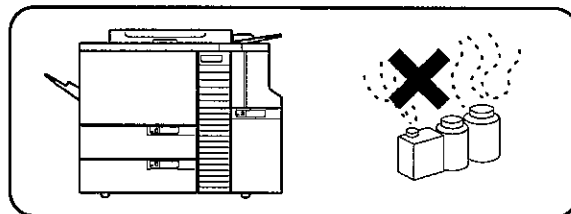


- Avoid installation in direct sunlight.

This may cause deformation or discoloration of the plastic components or result in poor copy quality.



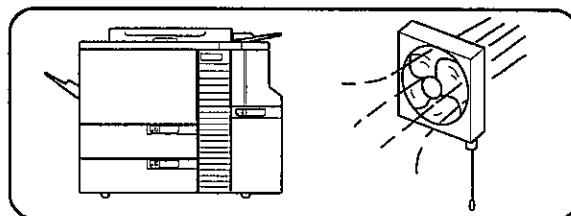
- Avoid installation where ammonia fumes are present. If the copier is installed near a diazo copier, it may cause poor copy quality.



- Avoid installation in a poorly ventilated location.

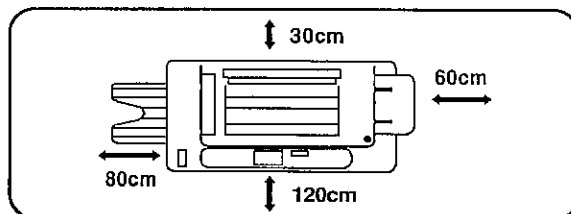
A small amount of ozone is produced within the copier during operation. The amount of ozone emitted by the copier is below the maximum emission level allowed by the IEC (International Electrotechnical Commission) 950 Standard. The emission level is insufficient to cause any health hazard. However, since the small amount that is emitted may have an objectionable odor, it is recommended to place the copier in a well ventilated room.

- \* When installing the copier near a window, be careful not to expose it to direct sunlight.



- Avoid installation close to a wall

Allow enough space around the copier to ensure proper operation. (For spacing requirements, refer to the figure below.)



## 2. Transit and moving

When moving the SD-2060 body, carefully perform the following items.

### (1) Locking

It is important that all shipping locks are installed when transporting the machine. If the shipping locks are not installed, the sub-assembly mechanisms may be affected by vibration during transportation.

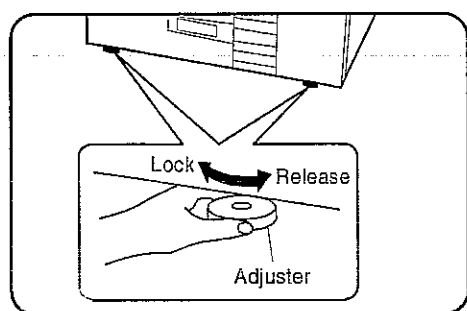
- Optical system: Lens, Mirror base No.2/No.3, Mirror base No. 4/ No. 5
- Paper feed section: Each paper feed tray bottom plate
- Process section: Contact and separation of the cleaning blade

For the locking procedure, refer to the unpacking procedure.

### (2) Installation adjuster release

When moving the machine, be sure to release the installation adjusters.

**IMPORTANT: AFTER MOVING AND INSTALLING THE SD-2060, TURN THE INSTALLATION ADJUSTERS UNTIL THEY REACH THE FLOOR TO STABILIZE THE MACHINE.**



### (3) Transit and moving

When moving the machine within the same building, it is recommended to use a serviceman to ensure safe moving.

## 3. Power source

### (1) Power outlet and plug specifications check

A 20A dedicated line is recommended for proper operation. If the capacity is less than the rating (20A), advise the user to provide a new power line.

### (2) Destination setting

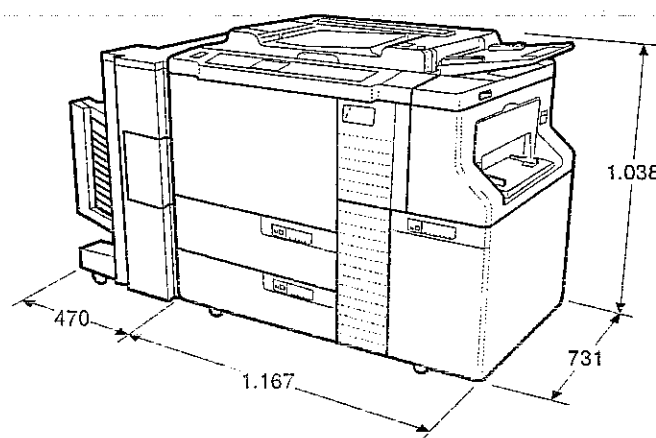
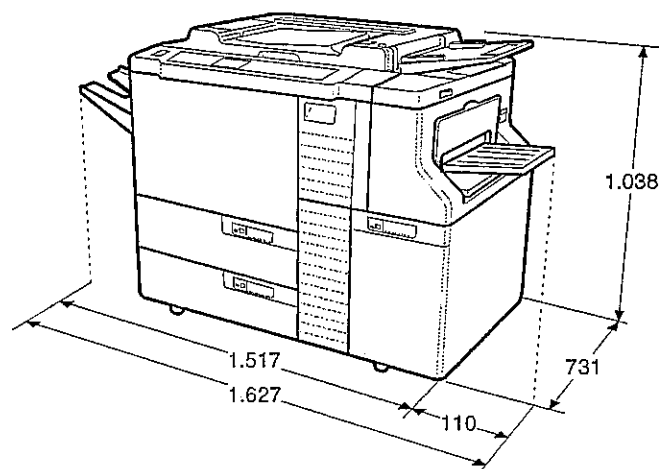
Set by simulation No. 26-06

If the machine is not set to the proper destination setting, the set time of the heater temperature- low temperature detection timer is shortened, causing H4 trouble. Be sure to set the machine according to its own specification.

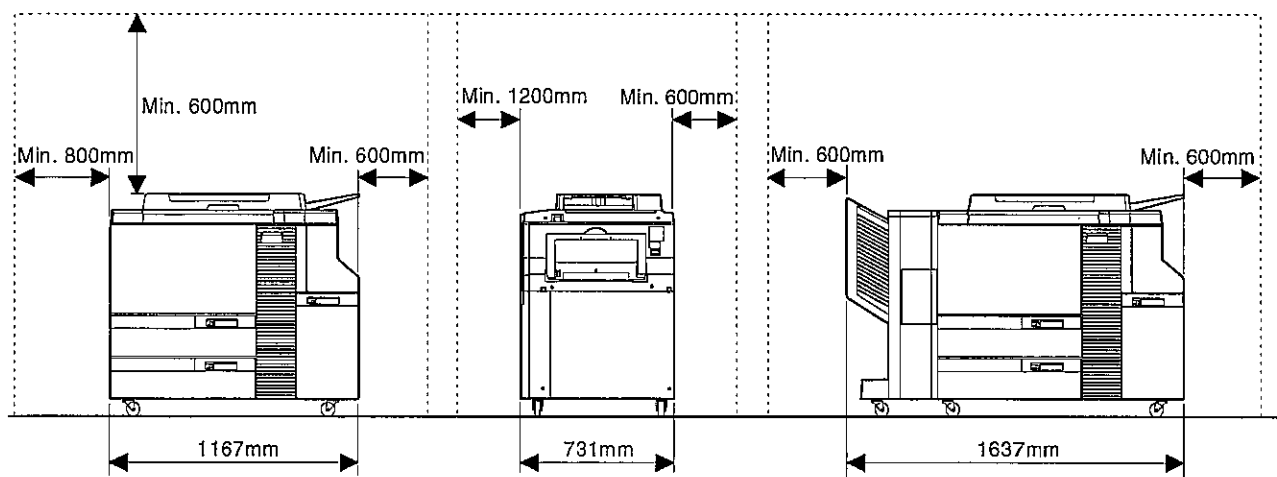
## 4. Installation space

The machine must be installed with ample space around it for assuring normal operations of all the functions. Proper space for servicing and maintenance is also required. (See next page)

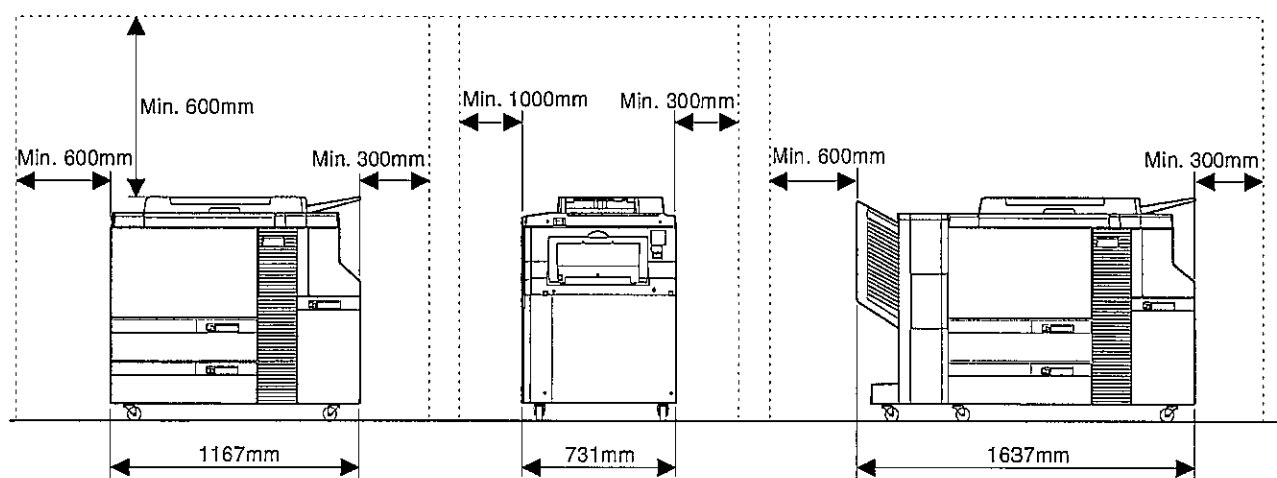
### (1) External dimensions



## (2) Installation (fixed)



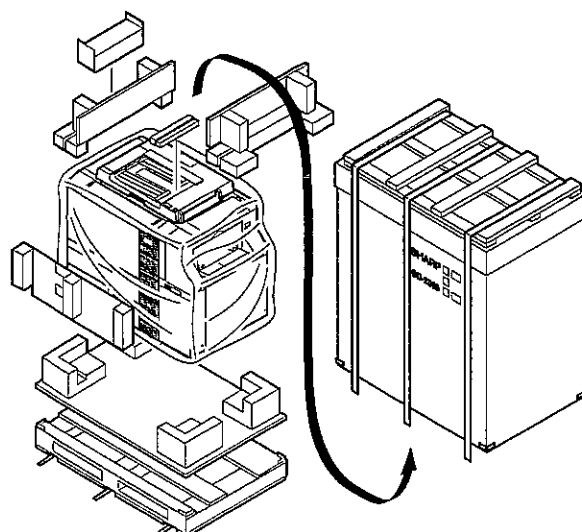
## (3) Installation (movable)



## 5. Unpacking procedure

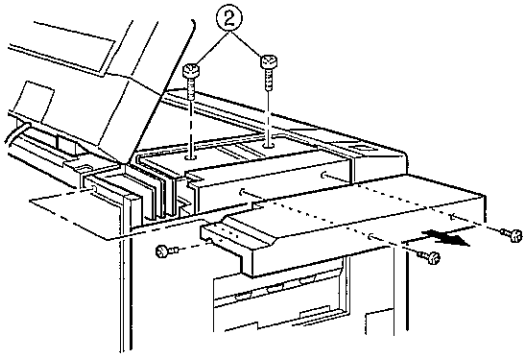
### (1) Unpacking procedure

- ① Cut the packing tape with scissors.
- ② Remove the packing material of upper carton.
- ③ Remove the upper carton cover.
- ④ Remove the body carton.
- ⑤ Remove the internal packing material.
- ⑥ Remove the packing material in the upper left of the SD-2060 body.



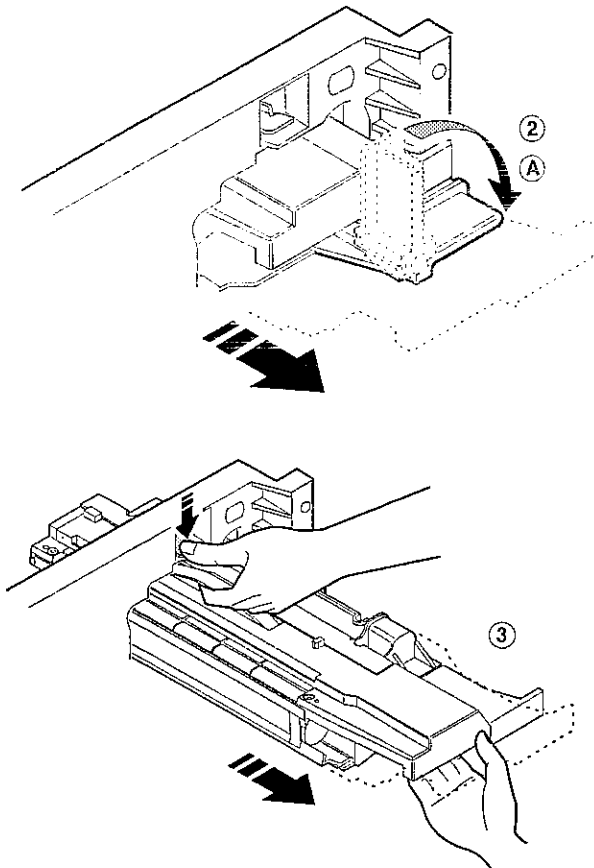
## (2) No. 2/No. 3 mirror base unit unlocking

- ① Remove the three fixings screws of the upper cabinet (Left), and remove the upper cabinet (Left).
- ② Remove two fixing screws of the No. 2/No. 3 mirror base unit.
- ③ Attach the upper cabinet (Left) with three fixings screws.



## (3) No. 4/No. 5 mirror base unit and lens unit unlocking

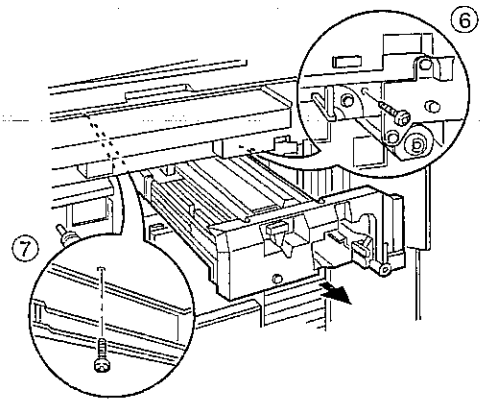
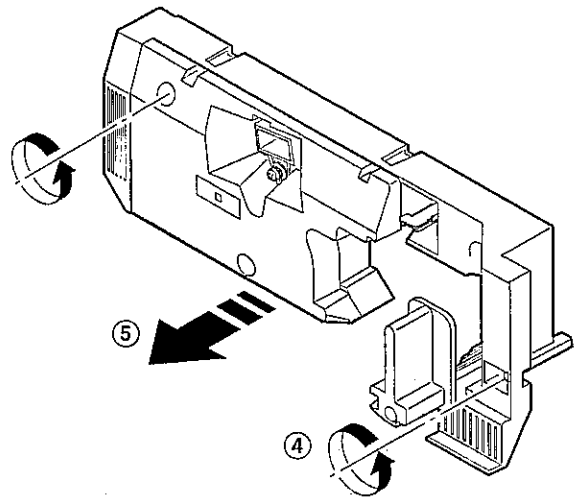
- ① Open the front cabinets (Left and Right).
- ② Put down the developer unit pressure lever to the right.
- ③ Hold the developer unit grip and pull it out. Hold the strap and keep pressing the developer unit lock release lever, and remove the developer unit from the main body.



- ④ Turn the transport section open/close lever clockwise to release the pressured contact with the process unit.
- ⑤ Loosen two fixing screws of the process unit, and pull out the process unit.

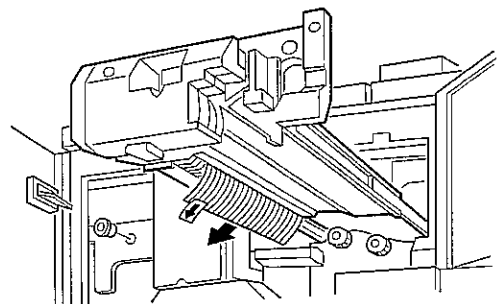
- ⑥ Remove the fixing screw of the No. 4/No. 5 mirror base unit.

- ⑦ Remove the lens unit fixing screw.



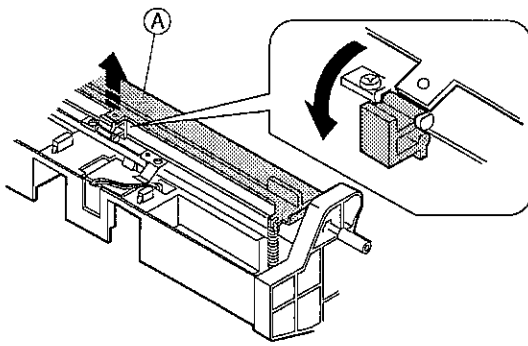
## (4) Photoconductor drum protection sheet removal

- ① Slowly pull out the black protection sheet located inside the process unit.



## (5) Cleaning blade set-up

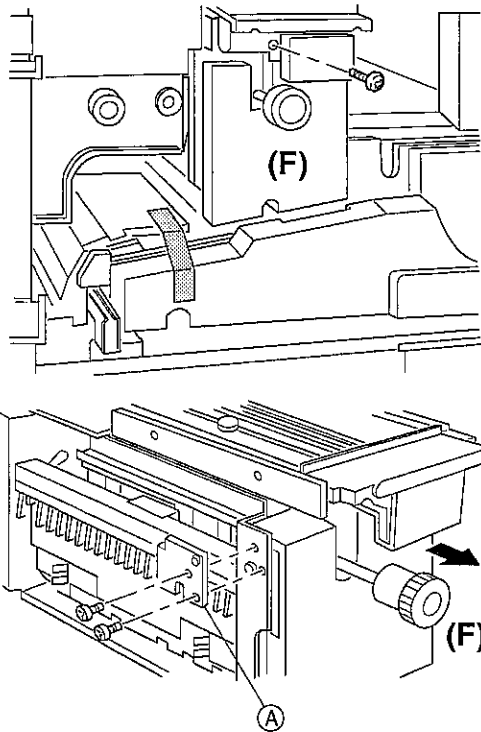
- ① Lift the cleaning blade mounting plate in the cleaner unit and flip the black cleaning blade lock down to the left. With the above operation, the cleaning blade will properly contact the photoconductor drum surface. If the picture quality adjustment is performed without the cleaning blade contacting the drum, a trouble code (F2-31,32, 33) will occur.



- ② Push the process unit into the body and fix it with two screws.

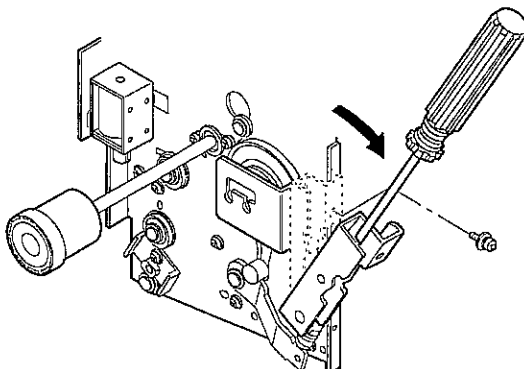
### (6) Fuser unit unlocking

- ① Remove the fuser unit fixing screw (1 pc.).
- ② Hold the fuser unit grip and pull it out.
- ③ Remove two fixing screws of the paper guide fixing plate in the fuser unit paper exit side, and remove the paper guide fixing plate.

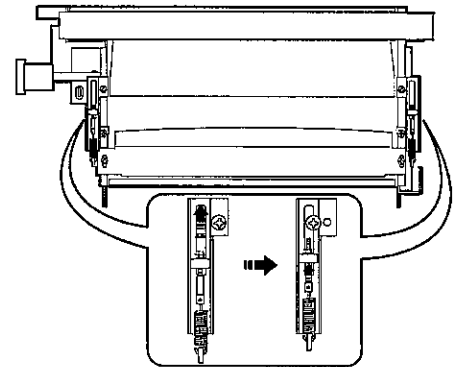


### (7) Fuser heat roller pressure setting

- ① Remove the fuser pressure lever fixing screw (Front) and tilt the fuser pressure lever.

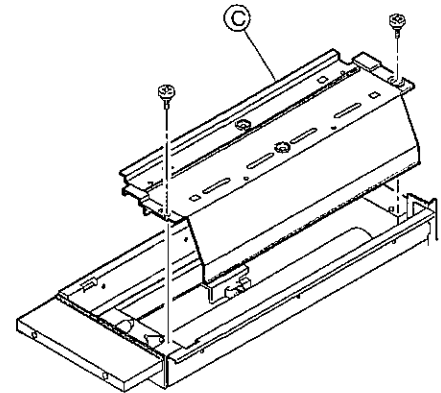


- ② Remove the nut and the washer which are attached to the fuser pressure adjustment nut section in the fuser unit (F, R) for preventing looseness in transit.
- ③ Tighten the fuser pressure adjustment nuts (F and R) until they stop.

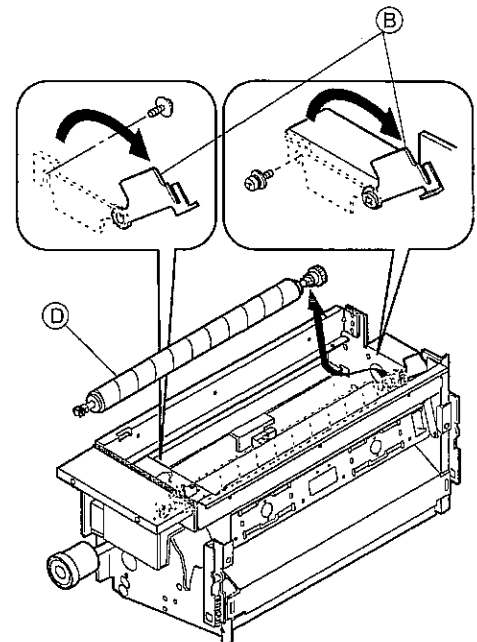


### (8) Fuser cleaning roller attachment

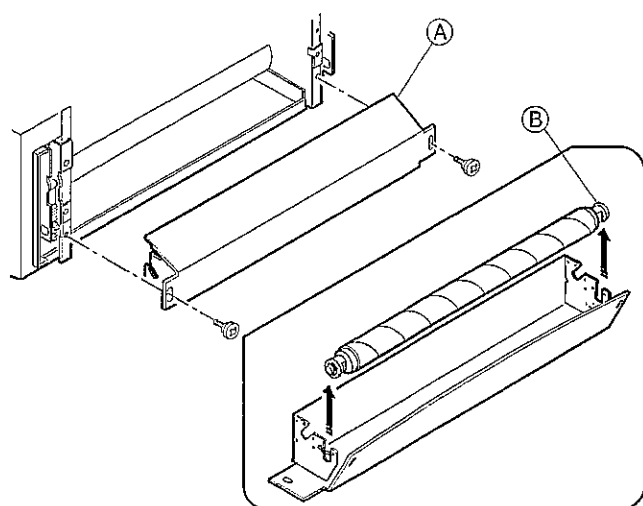
- ① Remove the cleaning rollers from the consumable parts unit packed together with the main body.
- ② Remove the fuser unit cover. (2 screws)



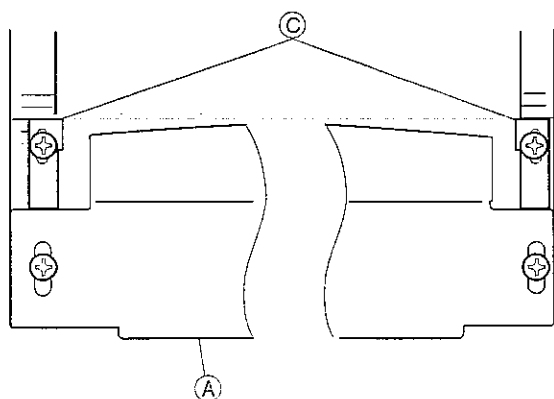
- ③ Attach the upper cleaning roller.



- ④ Remove the fuser paper guide. (2 screws)  
Attach the lower cleaning roller to the fuser paper guide.



※ When attaching paper guide FA unit (A), push it until it makes contact with the lower edge of paper guide positioning plate (C), then fix it with screws. Use the center mark as the reference.)

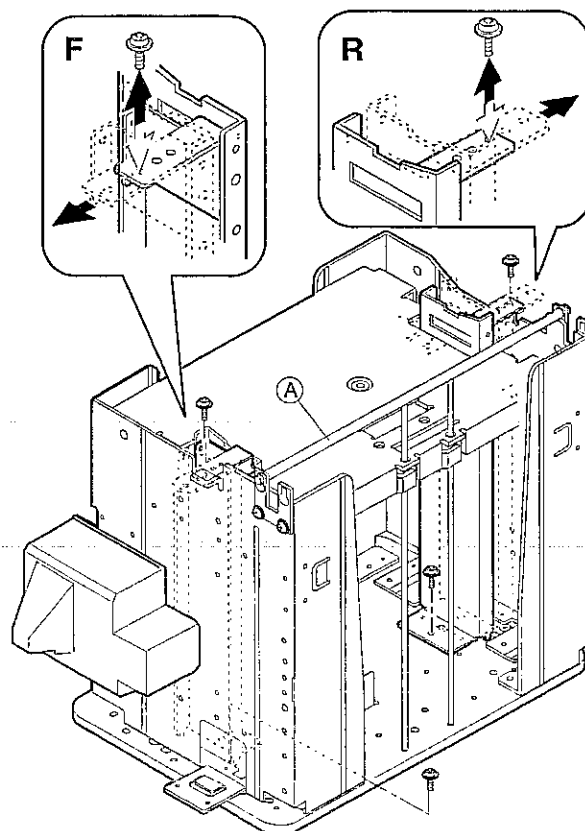


## (2000-sheet paper feed tray unit)

### (Paper size selection)

※ The BG shaft ass'y (A) is used for A4 and A5 size only.

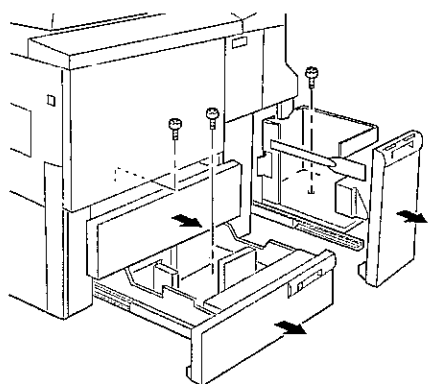
① Set the side guide F/R ass'y to the specified paper size.



## (9) Paper tray package fixing screw removal

① Pull out the paper feed tray unit.

② Remove the package fixing screw (1 pc. for each) of each paper feed tray bottom plate.



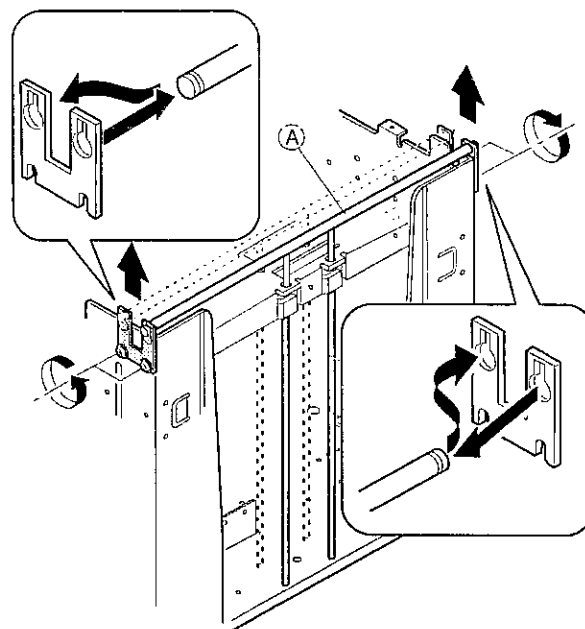
③ Set paper in each paper feed tray unit.

Since, however, the first tray is for a fixed size, the setting should be changed accordingly.

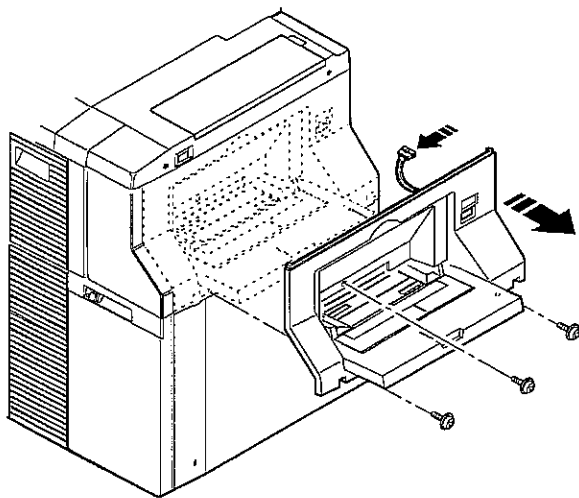
For changing the setting, refer to [5] DISASSEMBLY AND ASSEMBLY, "Paper fed section."

④ Push each paper feed tray into the body.

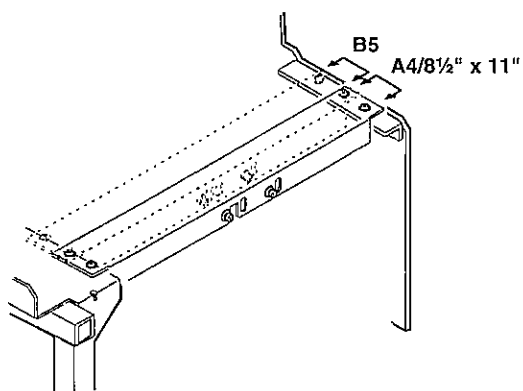
② Set the BG shaft ass'y (A) to the specified paper size. (In the case of 8 1/2" x 11", remove the BG shaft.)



- ③ Remove the upper right cover/manual feed tray. (3 screws)

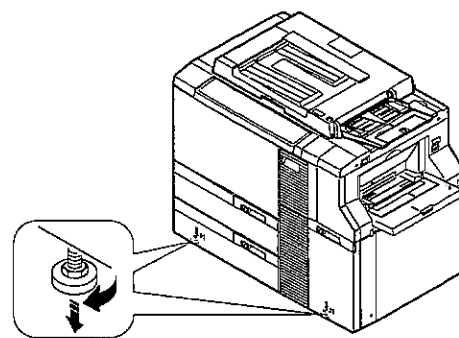


- ④ Set the paper feed tray rising sensor (TUD1) mounting plate to the specified paper size.



## (10) Duplicator installation adjuster fixing

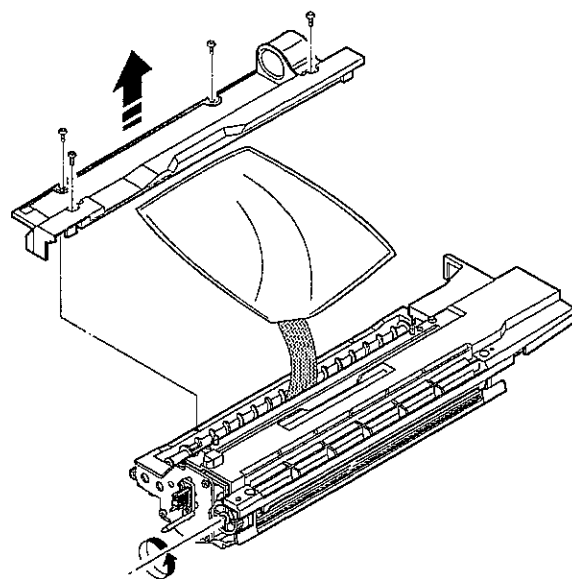
- ① Fix the installation adjusters on the front side of the body in order to assure stable operation of the duplicator.  
There are two installation adjusters (one on the right, one on the left) on the front frame side to fix the body.



## 2. Installation and adjustment procedures

### (1) Developer supply

- ① Remove the toner transport section of the developer unit. (4 screws)  
② Pour developer into the developer unit. (2 packs, 2kg)  
③ Attach the toner transport section. (4 screws)



## (2) Toner initial density level registration (automatic developer adjustment)

- ① Insert the developer unit into the process unit and lock it into place by raising the developer unit pressure lever.
- ② Ensure that the process unit, transport unit, and fuser unit are properly installed.
- ③ Close the front cabinet (L, R).
- ④ Connect the power cord to the power outlet, and turn on the power switch.
- ⑤ Perform simulation 25-02.

The drum motor rotates to drive the developer unit for 3 minutes. After 3 minutes the initial toner density level is detected by the toner density sensor and registered in the memory in the main PWB.

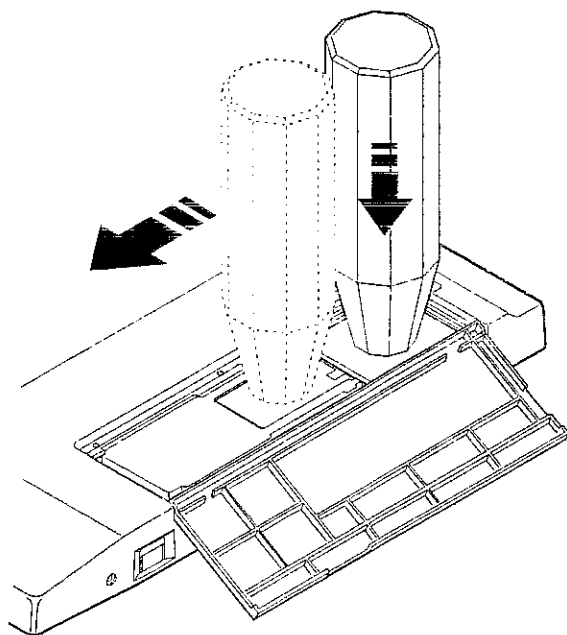
[Note] When performing the automatic developer adjustment, check the following items in advance.

- Check that the cleaner blade is in contact with the drum.
- Check that each charger unit is installed.

- ⑥ Cancel the simulation mode.

## (3) Toner supply

- ① Install toner after completion of the automatic developer adjustment. Shake the toner cartridge before installation.
- ② Set the toner cartridge on the toner hopper cover section and slide it forward.
- ③ Tap the toner cartridge sides to feed toner to the hopper.



- ④ Slide the toner cartridge to the rear and remove it.

## (4) Warmup

<Photoconductor drum temperature>

The SD-2060 is equipped with a drum heater to stabilize the copy quality. When the power plug is connected to the power outlet, the drum reaches the stable temperature in about 15 minutes. Be sure to allow this time before the copy quality adjustment.

## (5) Initial setting of the duplicator and the system

- ① Perform simulation 26 (Mode setting and check).

```
SIMULATION NO.26
INPUT 1-7
1.OPTION SETUP
2. TRAY1 SIZE SETUP
3. AUDITOR SELECTION
4. (NO PROGRAM)
5. COUNTER MODE SETUP
6. DESTINATION SETUP
7. DRUM SENSITIVITY SETUP
8. TRAY PAPER EMPTY SENSE TIME SETTING
```

- ② Perform simulation 27 (RiC setting). Perform setting as required.

```
SIMULATION NO.27
INPUT 1-5
1.DISABLING OF U7-00 TROUBLE
2.PC/MODEM DATA CHANGE. : TEL#
3.PC/MODEM DATA CHANGE. : ID#
4.SERVICE START/END REPORT
5.TAG NUMBER SETTING
```

- ③ Perform simulation 20 and 21 (Maintenance counter clear and cycle setting).
- ④ Perform simulation 42 (Developer counter clear).
- ⑤ Perform simulation 24 (Counter clear).

## (6) Initial setting of process control

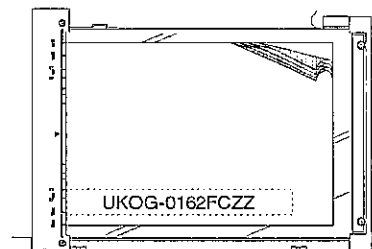
- ① Set the AE sensor gain level. (Simulation 47)
- ② Reset the membrane reduction counter. (Simulation 24-07)
- ③ Set the drum sensitivity. (Simulation 26-07)  
(If the drum is installed when shipping from the factory, this setting is not required.)
- ④ Adjust the drum marking sensor output level. (Simulation 44-02)
- ⑤ Adjust the process control sensor output level. (Simulation 44-03)
- ⑥ Check the process control reference value. (Simulation 44-04)  
Reference value: 75 (Check that this value is set.)
- ⑦ Set the process control INHIBIT/ENABLE. (Simulation 44-01)  
Standard value: 7

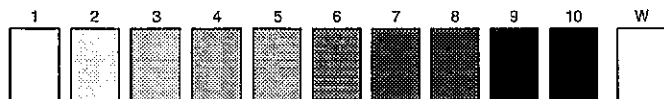
## (7) Initial picture quality adjustment procedure

- ① Test chart setting

Place several white sheets of paper (specified by Sharp) of about 120 mm wide and about 450 mm long or larger on the original table in the center reference.

Place a test chart (UKOG-0162FCZZ) as shown below:





Test chart comparison table

|                              |     |   |     |   |     |   |   |   |     |     |   |
|------------------------------|-----|---|-----|---|-----|---|---|---|-----|-----|---|
| UKOG-0162FCZZ<br>DENSITY No. | 1   | 2 | 3   | 4 | 5   | 6 | 7 | 8 | 9   | 10  | W |
| UKOG-0089CCZZ<br>DENSITY No. | 0.1 |   | 0.2 |   | 0.3 |   |   |   | 0.5 | 1.9 | 0 |
| KODAK GRAY<br>SCALE          |     | 1 |     | 2 |     | 3 |   | 4 |     | 19  | A |

SHARP CORPORATION  
MADE IN JAPAN

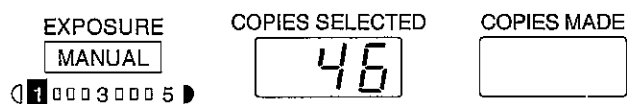
## ② Manual exposure mode adjustment

Perform simulation 46-01, and the following display will be given.

SIMULATION NO. 46

INPUT (450 - 800): NORMAL MODE

(TONER SAVE MODE: USE [→] KEY.)



Check that the exposure display cursor shows "1."

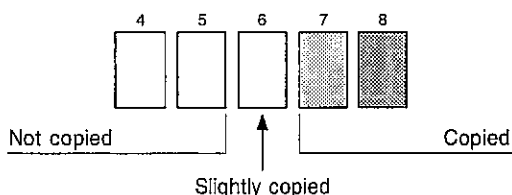
If not, set to "1" with [1] (LIGHT) key.

Make a copy.

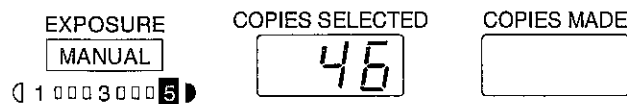
Check that "6" of UKOG-0162FCZZ is slightly copied and "5" is not copied. (In the case of UKOG-0089CSZZ, check that 0.5 is clearly copied and 03 is not copied.)

&lt;When too light&gt; Reduce the number displayed in the COPIES MADE display.

&lt;When too dark&gt; Increase the number displayed in the COPIES MADE display.



When the copy density is within the specified range, set to "5" with [5] (DARK) key.



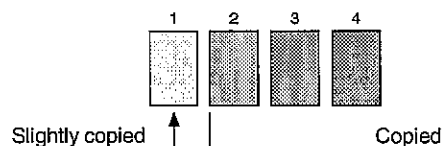
Check that the exposure display cursor shows "5."

Make a copy.

Check that "1" of UKOG-0162FCZZ is slightly copied and "W" is not copied. (In the case of UKOG-0089CSZZ, check that 0.1 is slightly copied and 0 is not copied.)

When too light Reduce the number displayed in the COPIES MADE display.

When too dark Increase the number displayed in the COPIES MADE display.



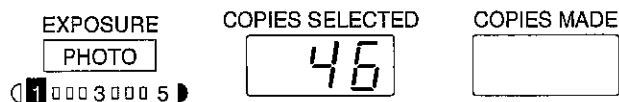
When the copy density is within the specified range, set to the photo mode with the exposure select key.

## ③ Photo mode adjustment

SIMULATION NO. 46

INPUT (450 - 800) PHOTO MODE

(TONER SAVE MODE: USE [-] KEY.)



Check that the exposure display cursor shows "1."

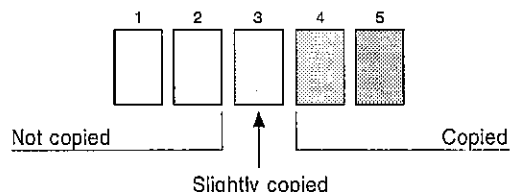
If not, set to "1" with [1] (LIGHT) key.

Make a copy.

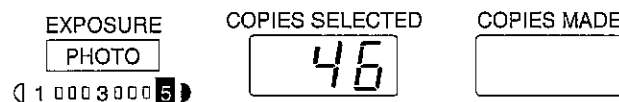
Check that "6" of UKOG-0162FCZZ is slightly copied and "5" is not copied. (In the case of UKOG-0089CSZZ, check that 0.5 is clearly copied and 03 is not copied.)

&lt;When too light&gt; Reduce the number displayed in the COPIES MADE display.

&lt;When too dark&gt; Increase the number displayed in the COPIES MADE display.



When the copy density is within the specified range, set to "5" with [5] (DARK) key.



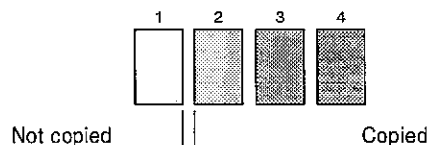
Check that the exposure display cursor shows "5."

Make a copy.

Check that "1" of UKOG-0162FCZZ is slightly copied and "W" is not copied. (In the case of UKOG-0089CSZZ, check that 0.1 is slightly copied and 0 is not copied.)

&lt;When too light&gt; Reduce the number displayed in the COPIES MADE display.

&lt;When too dark&gt; Increase the number displayed in the COPIES MADE display.



When the copy density is within the specified range, set to the automatic exposure mode with the exposure selection key.

## ④ Auto exposure mode adjustment

SIMULATION NO. 46

INPUT (450 - 800): NORMAL MODE  
(TONER SAVE MODE: USE [→] KEY.)

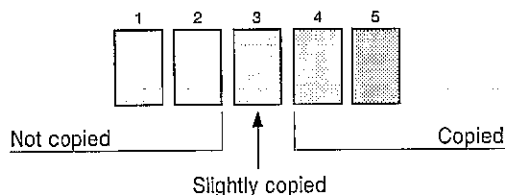
| EXPOSURE | COPIES SELECTED | COPIES MADE |
|----------|-----------------|-------------|
| AUTO     | 46              |             |

Make a copy.

Check that "3" of UKOG-0162FCZZ is slightly copied and "2" is not copied. (In the case of UKOG-0089CSZZ, check that 0.2 is clearly copied and 0.1 is not copied.)

<When too light> Reduce the number displayed in the COPIES MADE display.

<When too dark> Increase the number displayed in the COPIES MADE display.



When the copy density is within the specified range, set to the manual exposure TSM mode with [→] key.

## ⑤ Manual exposure (TSM) mode adjustment

SIMULATION NO. 46

INPUT (450 - 800): TONER SAVE MODE  
(NORMAL MODE: USE [→] KEY.)

| EXPOSURE | COPIES SELECTED | COPIES MADE |
|----------|-----------------|-------------|
| MANUAL   | 46A             |             |

Q 1 000 3 000 5

Check that the exposure display cursor shows "1."

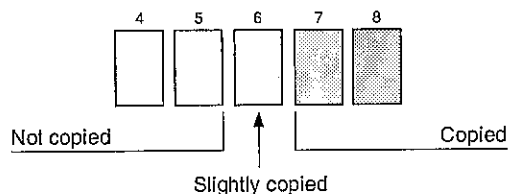
If not, set to "1" with [Q] (LIGHT) key.

Make a copy.

Check that "6" of UKOG-0162FCZZ is slightly copied and "5" is not copied. (In the case of UKOG-0089CSZZ, check that 0.5 is slightly copied and 0.3 is not copied.)

When too light Reduce the number displayed in the COPIES MADE display.

When too dark Increase the number displayed in the COPIES MADE display.



When the copy density is within the specified range, set to "5" with [D] (DARK) key.

| EXPOSURE | COPIES SELECTED | COPIES MADE |
|----------|-----------------|-------------|
| MANUAL   | 46A             |             |

Q 1 000 3 000 5

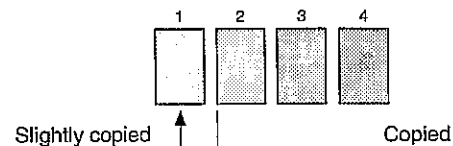
Check that the exposure display cursor shows "5."

Make a copy.

Check that "1" of UKOG-0162FCZZ is slightly copied and "W" is not copied. (In the case of UKOG-0089CSZZ, check that 0.5 is slightly copied and 0.3 is not copied.)

<When too light> Reduce the number displayed in the copied quantity display.

<When too dark> Increase the number displayed in the copied quantity display.



When the copy density is within the specified range, set to the auto exposure (TSM) mode with the exposure selection key.

## ⑥ Auto exposure (TSM) mode adjustment

SIMULATION NO. 46

INPUT (450 - 800): TONER SAVE MODE  
(NORMAL MODE: USE [→] KEY.)

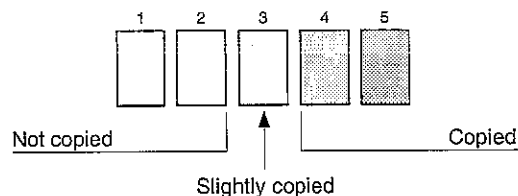
| EXPOSURE | COPIES SELECTED | COPIES MADE |
|----------|-----------------|-------------|
| AUTO     | 46A             |             |

Make a copy.

Check that "3" of UKOG-0162FCZZ is slightly copied and "2" is not copied. (In the case of UKOG-0089CSZZ, check that 0.2 is slightly copied and 0.1 is not copied.)

<When too light> Reduce the number displayed in the copied quantity display.

<When too dark> Increase the number displayed in the copied quantity display.



When the copy density is within the specified range, the picture quality adjustment is completed.

**(8) Exposure adjustment procedure list**

| Procedure | Adjustment item                     | Set level | UKOG-0162FCZZ copy |                 |            |
|-----------|-------------------------------------|-----------|--------------------|-----------------|------------|
|           |                                     |           | Copied             | Slightly copied | Not copied |
| 1         | Execution of simulation 46 (※)      |           |                    |                 |            |
| 2         | Manual mode exposure adjustment     | EXP.N-1   | 7                  | 6               | 5          |
|           |                                     | EXP.N-5   | 2                  | 1               | W          |
| 3         | Photo mode exposure adjustment      | EXP.P-1   | 7                  | 6               | 5          |
|           |                                     | EXP.P-5   | 2                  | 1               | W          |
| 4         | N-AE mode exposure adjustment       | N-AE      | 4                  | 3               | 2          |
| 6         | Switch to the save mode             |           |                    |                 |            |
| 7         | Toner save mode exposure adjustment | EXP.T/S-1 | 7                  | 6               | 5          |
|           |                                     | EXP.T/S-5 | 2                  | 1               | W          |
| 8         | T/S-AE mode exposure adjustment     | T/S-AE    | 4                  | 3               | 2          |
| 9         | Completion of exposure adjustment   |           |                    |                 |            |

※ Since the machine enters the process control mode immediately after execution of simulation 46, the copy lamp will light for several seconds.

**(9) SD-2060 SET-UP CHECKLIST**

Upon setting up the copier, be sure to perform the following checks to ensure that all systems within the copier are functioning properly prior to on-site installation.

**Set-Up Test Commands**

| Test Command | Description                                             | Setting                                                                                                                                                                                             |
|--------------|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 21-01        | Maintenance Cycle Setting                               | 1. 125K<br>2. 250K<br>3. NONE                                                                                                                                                                       |
| 26-01        | Option Setting                                          | 1. FINISHER/NO SORTER<br>2. NO FINISHER/NO SORTER<br>3. SORTER.STAPLE SORTER                                                                                                                        |
| 26-02        | Tray 1 Size Setting                                     | 1. 8.5 x 11<br>2. A4<br>3. B5                                                                                                                                                                       |
| 26-03        | Auditor Mode Setting                                    | 01. P10 (500)<br>02. P10 (3100)<br>03. SF_EA11<br>04. OTHER                                                                                                                                         |
| 26-05        | Counter Mode Setting                                    | TOTAL COUNT    MAINTENANCE COUNT<br>0 DOUBLE COUNT    DOUBLE COUNT<br>1 SINGLE COUNT    SINGLE COUNT<br>2 DOUBLE COUNT    DOUBLE COUNT<br>3 SINGLE COUNT    SINGLE COUNT                            |
| 26-06        | Destination Setting                                     | [INCH]<br>1. SEC    2. SECL    3. OTHER<br>[AB(B5)]<br>4. JAPAN 15A    5. JAPAN 20A<br>[AB(A5)]<br>6. SEEG    7. SUK    8. SCA    9. OTHER                                                          |
| 26-07        | Drum Sensitivity Setting<br>(When install the new drum) | The set value is indicated at the top digit of the label attached to the inside of the drum.<br><div style="border: 1px solid black; padding: 2px; display: inline-block;">SD360D*<br/>②*****</div> |

**Copy Image Checks**

Use the C-3 Test Chart (UKOG-0121FCZ3) to perform the following checks copy checks. If adjustment is required, perform the procedure found on the reference page.

| Check                          | Specification                                       | Test Command | Reference |
|--------------------------------|-----------------------------------------------------|--------------|-----------|
| Vertical Magnification Ratio   | 100% +/-1%                                          | 48-01        | pg. 6-6   |
| Horizontal Magnification Ratio | 100% +/-1%                                          | 48-02        | pg. 6-7   |
| Focus                          | 5.0 lines/mm in center,<br>4.5 lines/mm in corners. | 48-01        | pg. 6-6   |
| Lead Edge Registration         | 0 -3 mm                                             | 50-02        | pg. x-x   |
| Lead Edge Void Area            | 1 -13 mm                                            | 50-02        | pg. x-x   |

### Copy Quality Checks

Place a Sharp Gray Chart (UKOG-0162FCZZ) on the table glass and make copies in all copy modes (AE, Manual, and Photo). If the copies do not meet specification, perform the Copy Quality adjustment Procedure found in the service manual.

| Check                     | Setting Method                             |
|---------------------------|--------------------------------------------|
| Auto Exposure Density     | Key Operator Code 20 - set to "3. Normal". |
| Toner Save Mode Setting   | Key Operator Code 22 - set to "3. No".     |
| AE Sensor Characteristics | Test Command 47                            |
| Drum Sensitivity Setting  | Test Command 26-07                         |

| Test Command 46      | Specification                   |
|----------------------|---------------------------------|
| Manual Exp. 1        | 5 not copied, 6 slightly copied |
| Manual Exp. 5        | 1 not copied, 2 copied          |
| Toner Save Exp. 1    | 5 not copied, 6 slightly copied |
| Toner Save Exp. 5    | 1 not copied, 2 copied          |
| Photo Exp. 1         | 5 not copied, 6 slightly copied |
| Photo Exp. 5         | 1 not copied, 2 copied          |
| Auto Exp. 1 (Normal) | Input "0"                       |
| Auto Exp. 5 (Normal) | 2 not copied, 3 slightly copied |
| Auto Exp. 1 (TSM)    | Input "0"                       |
| Auto Exp. 5 (TSM)    | 2 not copied, 3 slightly copied |

### Operational Checks

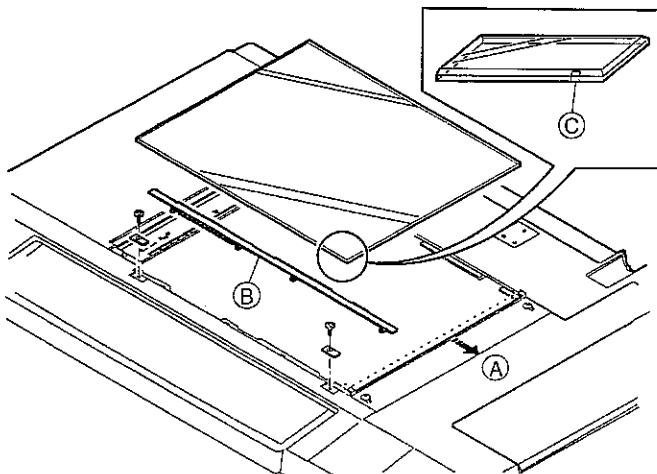
Place the (UKOG-0121FC2Z3)Test Chart on the table glass and make several copies from each feed station. Ensure that all feed areas are working properly. Place originals in the RADF and select one of the duplex copy modes. If a sorter is attached, select the sort mode and program 20 into the copy quantity display window. Ensure that the job is completed without any malfunctions occurring. Ensure that all features and options operate correctly. If a problem is encountered, repair the problem and run the job again.

## [5] DISASSEMBLY AND ASSEMBLY

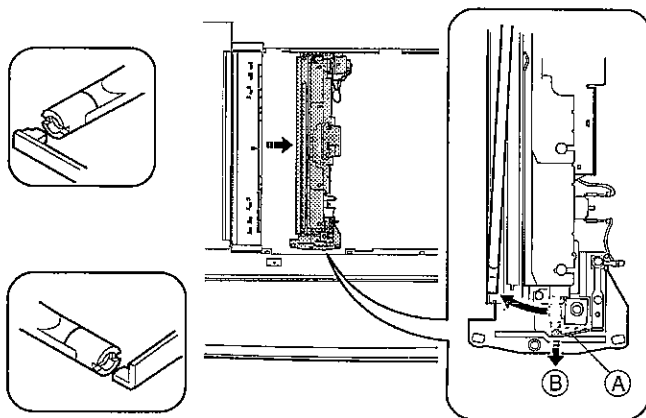
### 1. Optical unit

#### (1) Copy lamp

- ① Loosen the two fixing screws (A) of the table glass holding plate, slide the holding plate to the paper feed side, and remove the table glass.
- ② Remove the two RADF magnet catch plates. Remove the operation cabinet (B).  
When attaching the table glass, position the white mark (C) in the right front side. The surface of the table glass is coated to suppress static electricity.

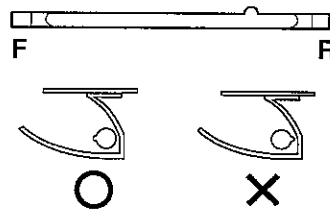


- ③ Move the copy lamp unit to the notch (in the front frame side) of the glass holding plate. Push the copy lamp electrode (A) on the front frame side in the direction of arrow (B) and remove the copy lamp.



#### Note:

- Do not move the light adjustment plate.
- Do not touch the lamp surface with bare hands.
- Check that the electrode is securely in the groove of the copy lamp.
- Be careful of the installing direction of the copy lamp.

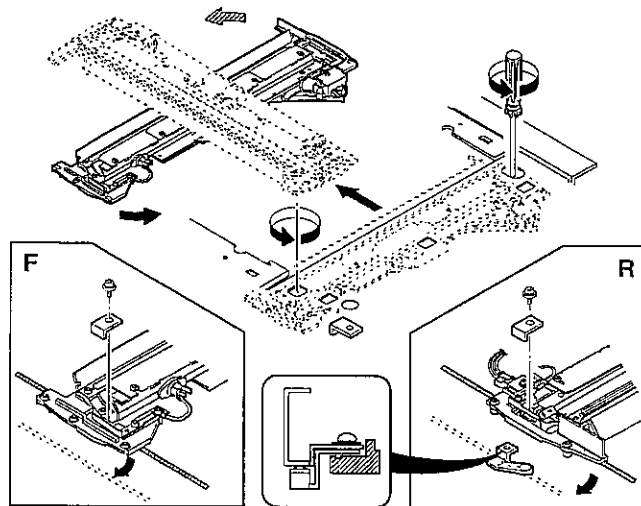


Attache so that the projected section of the copy lamp comes near the R side as shown above

#### (2) Copy lamp unit, No. 1 mirror base

Perform the above procedures ① and ②.

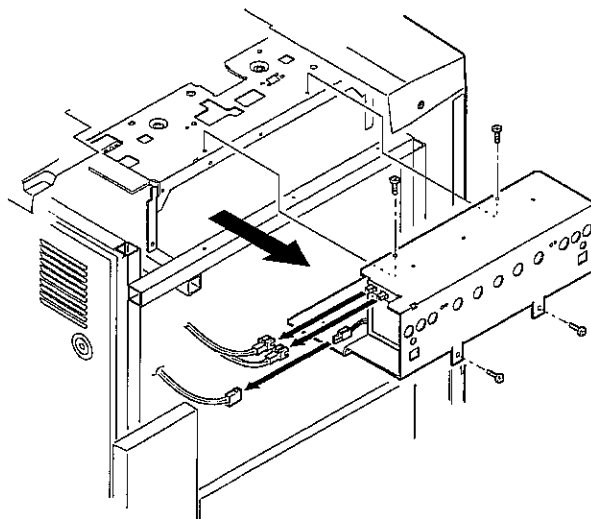
- ③ Move the copy lamp unit to the notch at the paper feed side.
- ④ Remove the No. 1 mirror base wire fixing plate (F/R) fixing screws.
- ⑤ Remove the copy lamp unit from the No. 1 mirror base.
- ⑥ Remove the No. 1 mirror base from the mirror base drive wire.



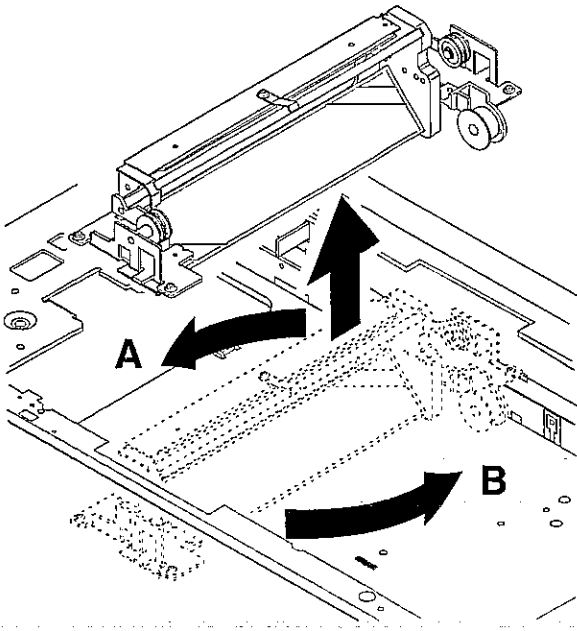
#### (3) No. 2, No. 3 mirror base unit

Perform the above procedure (2).

- ⑦ Remove the paper exit side cabinets. (3 screws)
- ⑧ Remove the cooling fan mounting unit. (4 screws, 3 connectors)



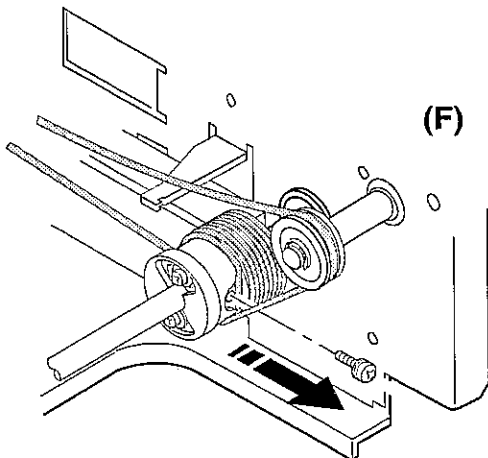
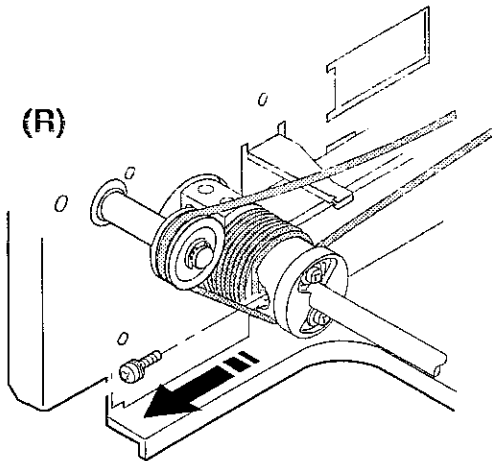
- ⑪ Disengage the mirror base wire (F/R) spring hook section, and remove the mirror base drive wire from the No. 2 and No. 3 mirror base unit pulley section. To remove, rotate the No. 2 and No. 3 mirror base unit 90 degrees (A → B).



#### (4) Mirror base drive wire

Perform the above procedure (3).

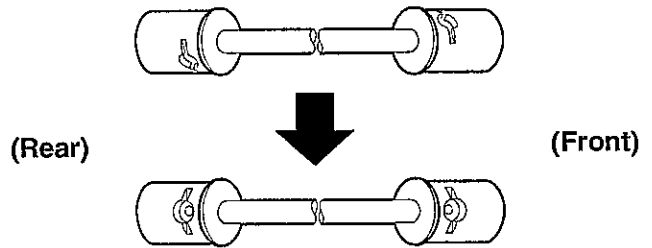
- ⑫ Remove the mirror base drive wire from the winding pulley (F/R). (2 screws)
- ⑬ Loosen the wire tension adjustment angle (F/R) screw.
- ⑭ Remove the wire hook section from the wire tension adjustment angle.



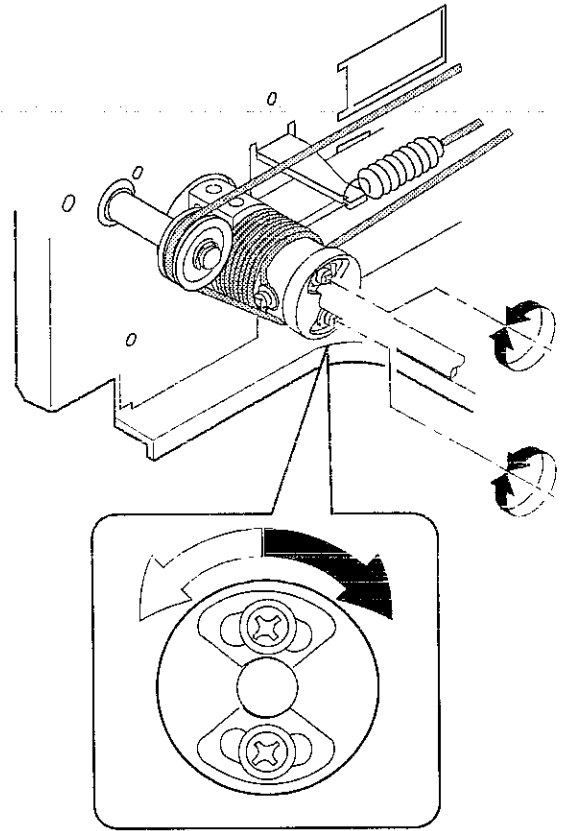
#### Mirror base wire installation

(Preliminary check items)

- Check the stop position of the wire winding pulley. Check that the wire groove in the wire winding pulley (F) is at the same position with the wire groove in the winding pulley (R).

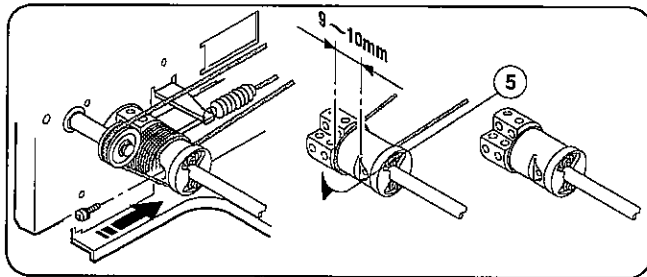


- Check that the tightening screws (2 each in the front and the rear) of the pulley flange and the wire winding pulley side are at the center of the pulley flange groove. If there is considerable shift in the position, loosen the two flange fixing screws to satisfy the above condition, and tighten the two screws.

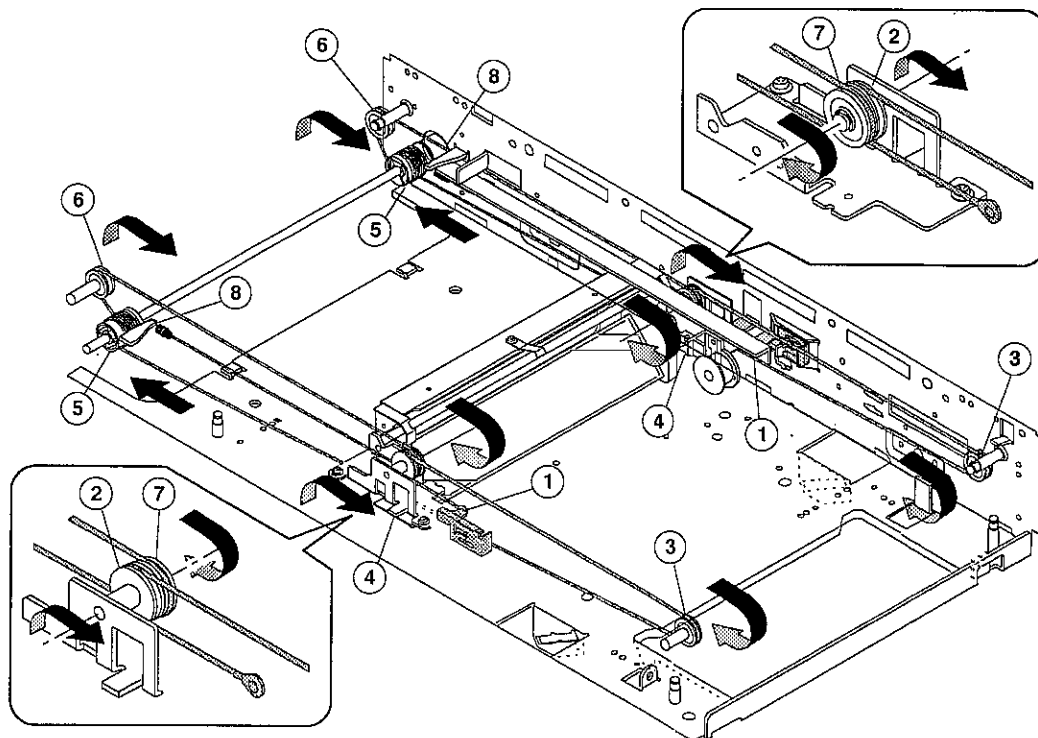
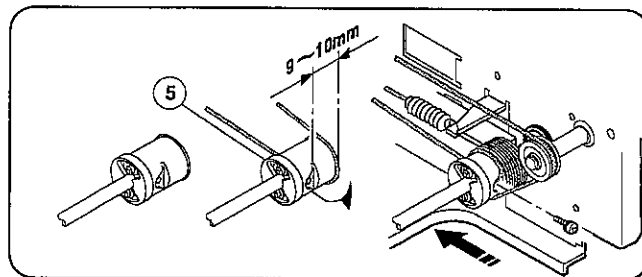


- Hang the mirror base drive wire fixture on the tension adjustment plate hook.
- Position the No.2/No.3 mirror base in contact with the mirror base positioning plate. Pass the front and the rear mirror drive wires along the groove outside the No. 2/No. 3 mirror base pulley.
- Pass the No. 2/No. 3 mirror base wire along the groove in the paper feed side pulley.
- Pass the mirror base wire under the No. 2/No. 3 mirror base.
- Wind the mirror base wire around the winding pulley. In this case, fix the wire groove in the winding pulley to the upper position, wind the mirror base drive wire 8 turns around the pulley and put the beginning of 9th turn into the groove.

When viewed from front frame

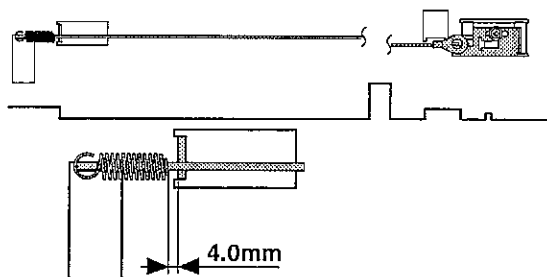


When viewed from rear frame



### Mirror base wire tension setting

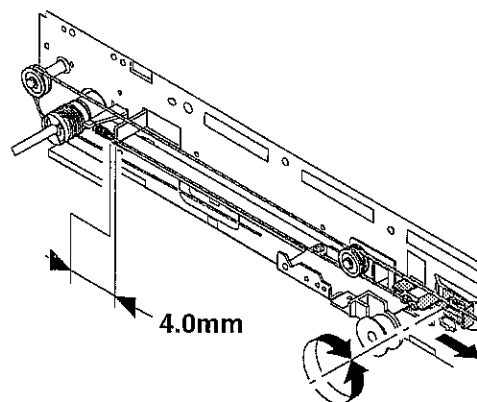
- ① Manually rotate the mirror base drive pulley to shift the No. 2/No. 3 mirror base to the mirror base positioning plate.
- ② Rotate the mirror base drive wire tension adjustment screw clockwise to increase its tension until the wire spring edge comes in contact with the body frame projection.
- ③ Manually rotate the mirror base pulley to make a few full scans of the No. 2/No. 3 mirror base and check that the mirror base drive wire spring edge is in contact with the main body frame projection. If they are not in contact with each other, rotate the tension adjustment screw to adjust again. In this case, check also that the wire over the mirror base pulley is not weighted.
- ④ Rotate the mirror base wire tension adjustment screw 6 turns counterclockwise. (The distance between the mirror base wire spring and the main body frame projection will be about 4mm.)



(Repeat the same procedure for the front frame side and the rear frame side.)

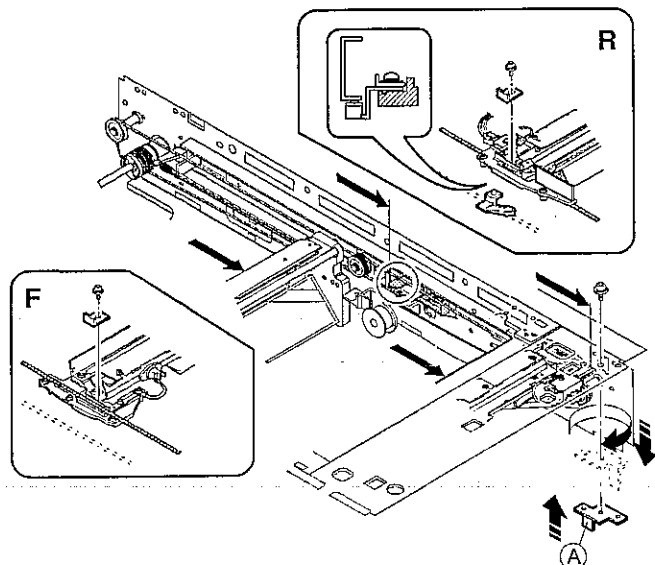
The first winding position of the mirror base drive wire is 9 - 10 mm from the pulley groove toward the main frame side.

- ⑤ Pass the mirror base drive wire along the paper exit side pulley groove.
- ⑥ Pass the mirror base wire along the internal groove of the No. 2/No. 3 mirror base pulley
- ⑦ Pass the mirror base drive wire through the wire guide.
- ⑧ Hang the mirror base drive wire tension spring on the projection in the optical base plate.



### Copy lamp unit installing position

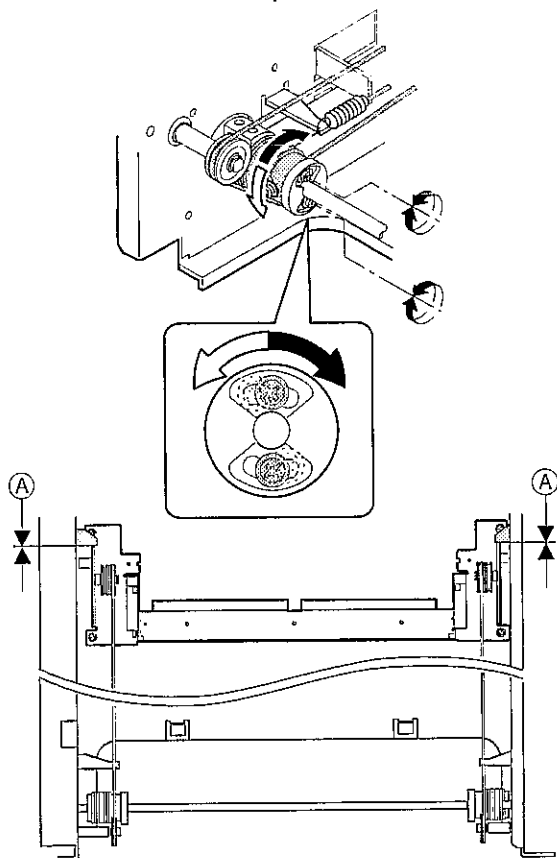
- ① Pass the front/rear mirror base drive wires between the copy lamp unit frame and the wire fixing plate. In this case, do not tighten the wire fixing screw.
- ② Remove the front/rear frame positioning plate fixing screw (1 pc.), rotate the positioning plate, and fix it with the screw again.
- ③ Push the copy lamp unit until it contacts surface A of the positioning plate, then tighten the wire fixing screw.



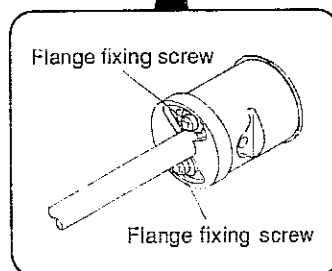
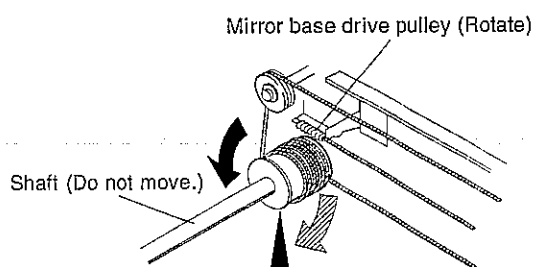
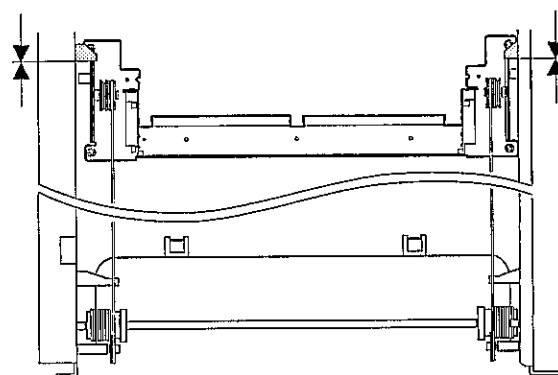
### No. 2/No. 3 mirror base unit installing position

This is to adjust the parallelism of the No. 2/No. 3 mirror base to the drum surface and the original.

- ① Manually rotate the mirror base drive pulley to bring the No. 2/No. 3 mirror base into contact with the mirror base positioning plates. In this case, if the front frame and the rear frame of the No. 2/No. 3 mirror base make contact with the mirror base positioning plates simultaneously, the No. 2/No. 3 mirror base parallelism is properly set and there is no need for adjustment.



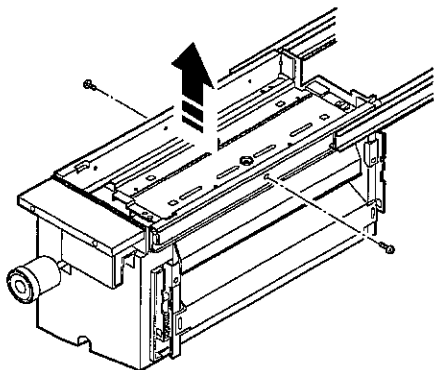
- ② Loosen the flange fixing screws on the side where the No. 2/No. 3 mirror base is not in contact with the mirror base positioning plate.
- ③ Manually rotate the mirror base drive pulley on the side where the No. 2/No. 3 mirror base is not in contact with the mirror base positioning plate until the No. 2/No. 3 mirror base comes in contact with the mirror base positioning plate.



- ④ Tighten the flange fixing screw.
- ⑤ Manually rotate the mirror base drive pulley to separate the No. 2/No. 3 mirror base from the mirror base positioning plate once, and then bring them in contact with each other again. In this case, check that the front frame side and the rear frame side of the No. 2/No. 3 mirror base make contact with the plates simultaneously.
- ⑥ If the condition in ⑤ is not satisfied, repeat procedures ② through ⑤ until it is satisfied.

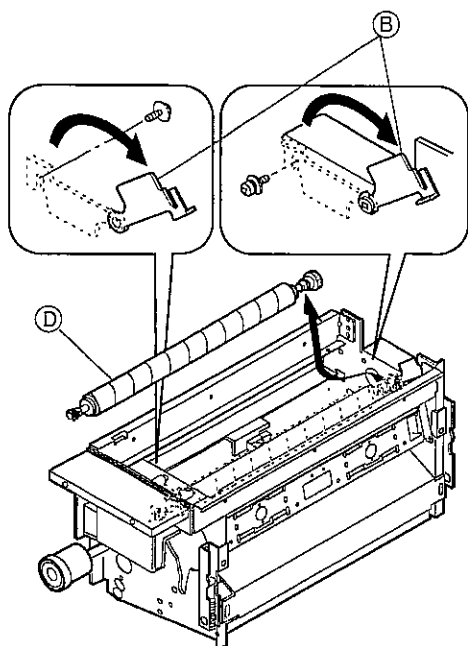
## 2. Fuser section

- Slide out and remove the fuser unit from the main body. (2 screws)
- (For normal maintenance, there is no need to remove the fuser unit.)



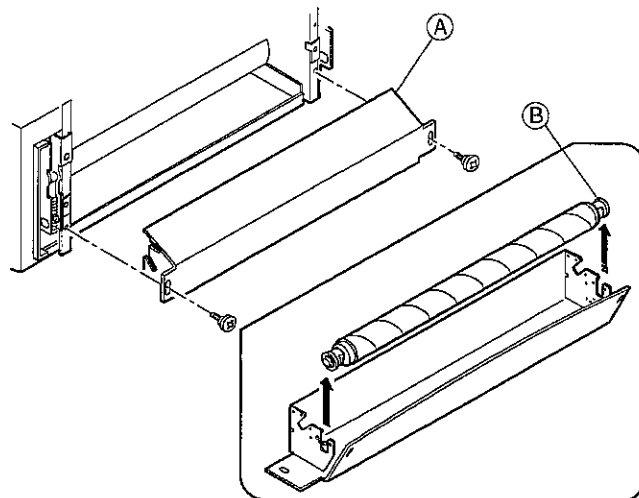
### (1) Upper cleaning roller

- Remove the fuser cover unit (A) from the fuser unit. (2 screws)
- Slide the upper CL rotation stop plate (B) in F and R. (Loosen two blue screws.)
- Remove the upper cleaning roller.



### (2) Lower cleaning roller, sub-cleaning roller

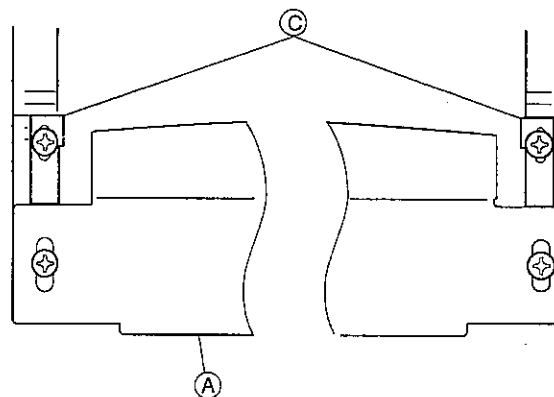
- Remove the paper guide FA unit (A) from the fuser unit. (2 blue screws)
- Remove the lower cleaning roller (B).



※ Put the black mark of the lower cleaning roller edge in the front side.

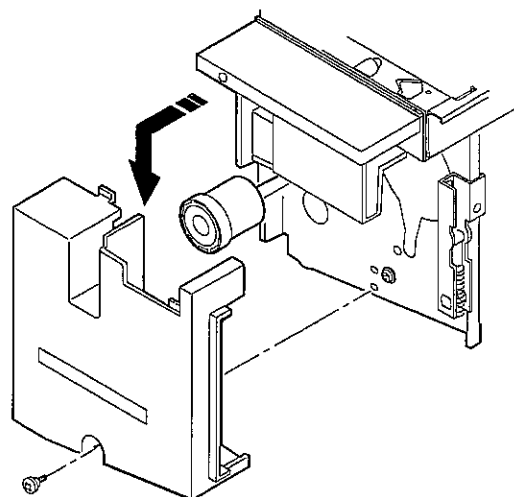
※ Be careful not to scratch the paper pass surface of the paper guide which is teflon-coated.

※ When attaching the paper guide FA unit (A), push it onto the lower edge of the paper guide positioning plate (C) and secure it using two screws. (The positioning plate is of the center reference.)



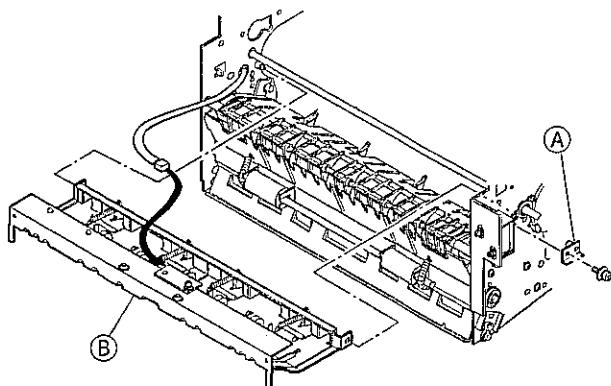
### (3) Upper and lower separation pawls

- Remove the Fuser front cover. (1 screw)



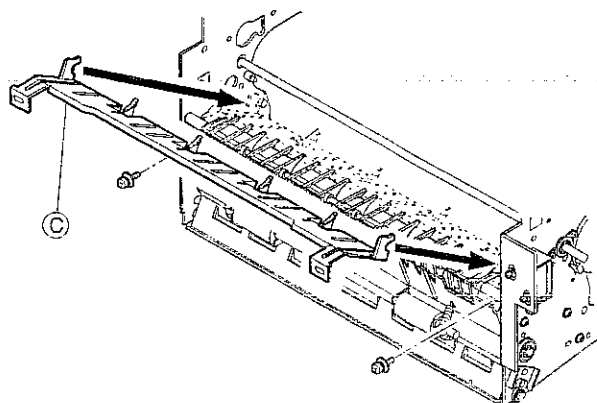
- ② Remove the Fuser plate ass'y (A) and remove the paper guide FB unit (B). (1 blue screw, 1 connector)

- ③ Remove the upper separation pawls. (4 pcs. in total)

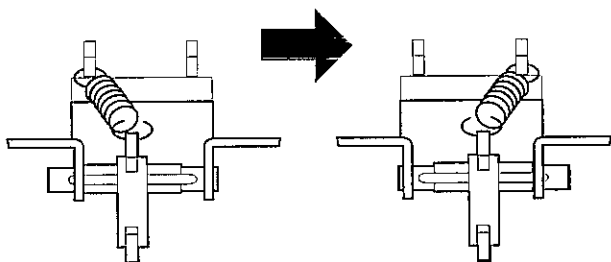


- ④ Remove the paper guide FC unit (C). (2 blue screws)

- ⑤ Remove the lower separation pawls. (4 pcs. in total)



- ※ When replacing the separation pawls, shift the hooking position of the spring.  
Shift the mounting position of the paper guide (FB · FC) at maintenance of every 125K.



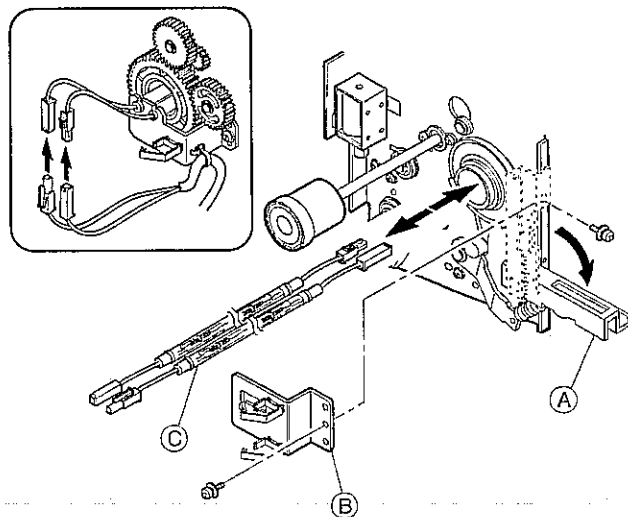
#### (4) Heater lamp

- ① Remove the fuser front cover. (Refer to (3)-①.)

- ② Release the pressure lever (A) on the front side. (1 blue screw)

- ③ Remove the heater lamp holder F (B).

- ④ Remove the heater lamp (C). (2 connectors each)

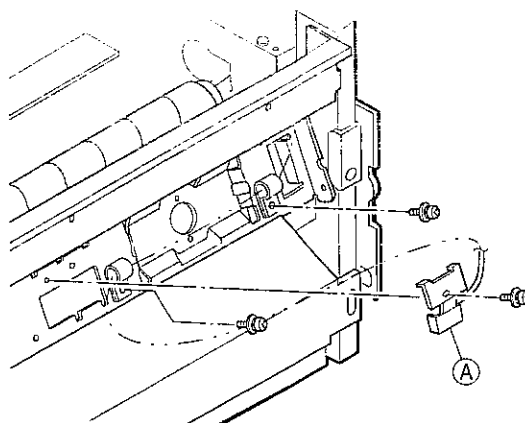


- ※ Note that the heater lamp holder F and the thermistor mounting plate unit are secured with the same screw.

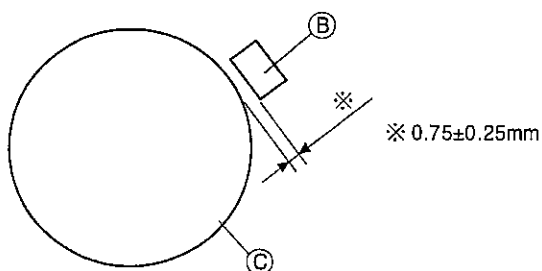
#### (5) Thermistor

- ① Remove the Fuser front cover. (Refer to (3)-①.)

- ② Remove the thermistor (A). (1 screw, 1 connector)

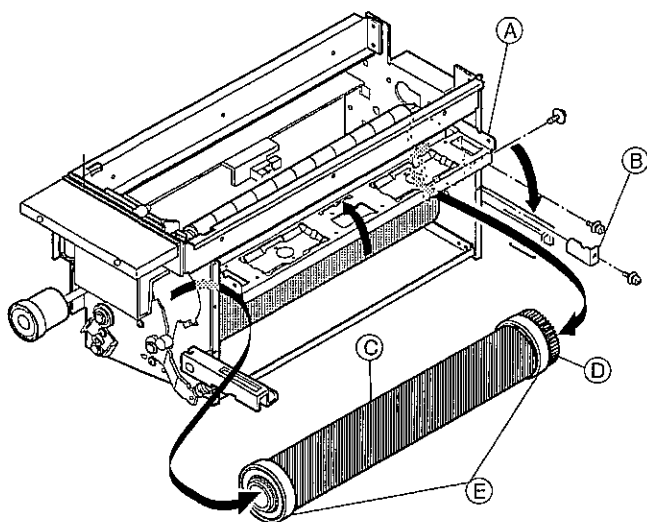


- ※ The clearance between the thermostat (B) and the upper heat roller (C) must be  $0.75 \pm 0.25$  mm.

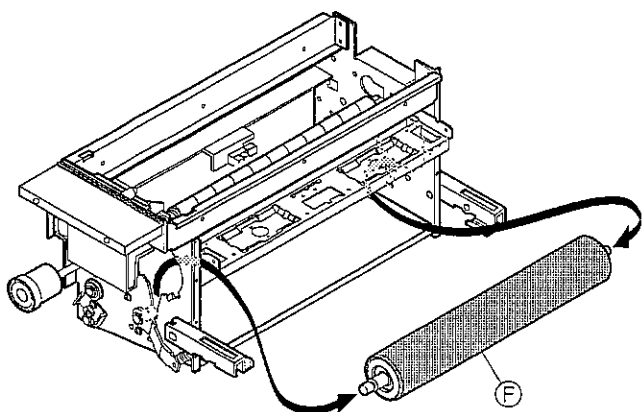


### (6) Upper and lower heat rollers

- ① Remove the heater lamp. (Refer to (4).)
- ② Slide the thermistor mounting plate unit (A) upwards. (2 blue screws)
- ③ Release the pressure lever. (each 1 blue screw)
- ④ Remove the bearing holding plate (B). (1 blue screw)
- ⑤ Remove the upper heat roller (C).  
When attaching the upper heat roller (C), first insert the rear frame side, then fix the front frame side.
- ⑥ Remove the heat roller gear (D). (2 screws)
- ⑦ Remove the heat roller bearings (F/R) (E).



- ⑧ Remove the lower heat roller (F).

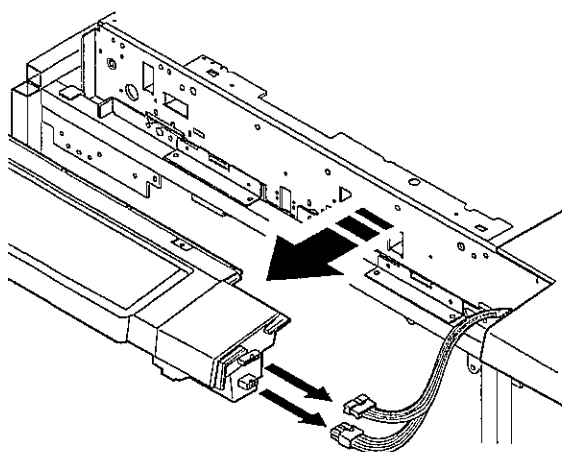
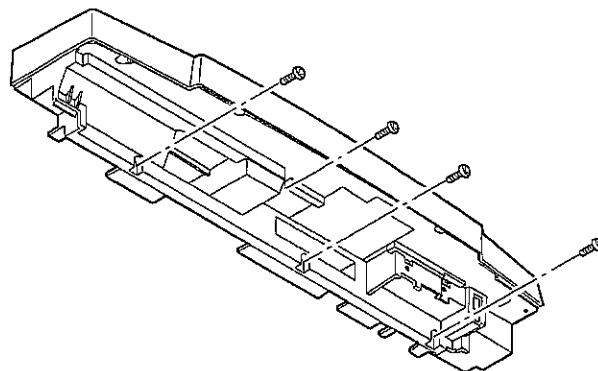


- ※ Be careful not to scratch the heat roller and the gear.

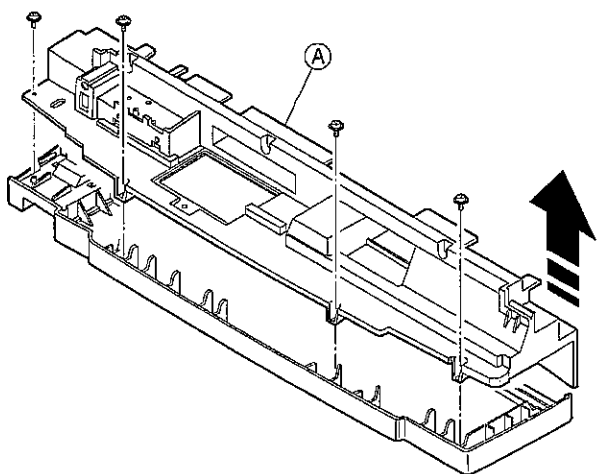
## 3. Operation panel

### (1) Operation panel removal

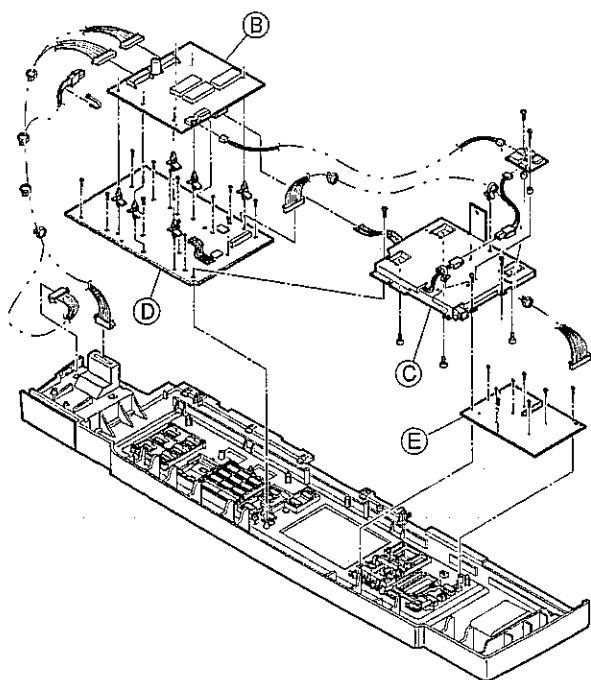
- ① Remove the table glass. (2 screws)
- ② Remove the catch plate. (Each one screw)
- ③ Remove the operation panel unit. (4 screws, 2 connectors)



- ④ Remove intermediate cabinet (A) of the operation panel. (4 screws)

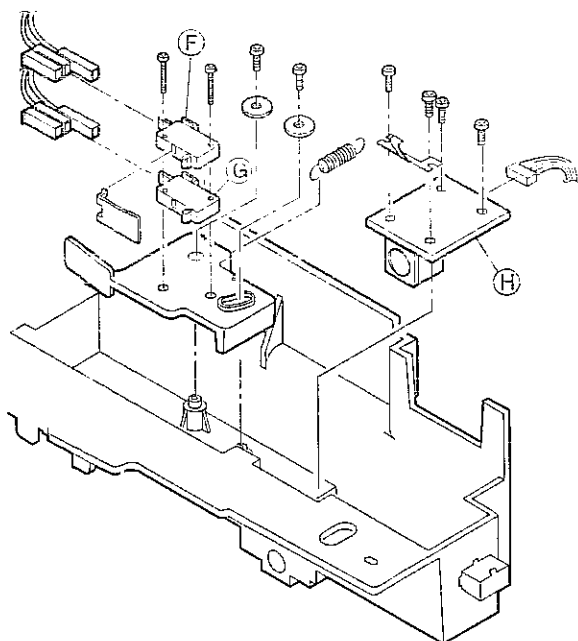


- ⑤ Remove operation control PWB ⑥, LCD unit ⑦, operation PWB 1 ⑧, and operation PWB 2 ⑨.



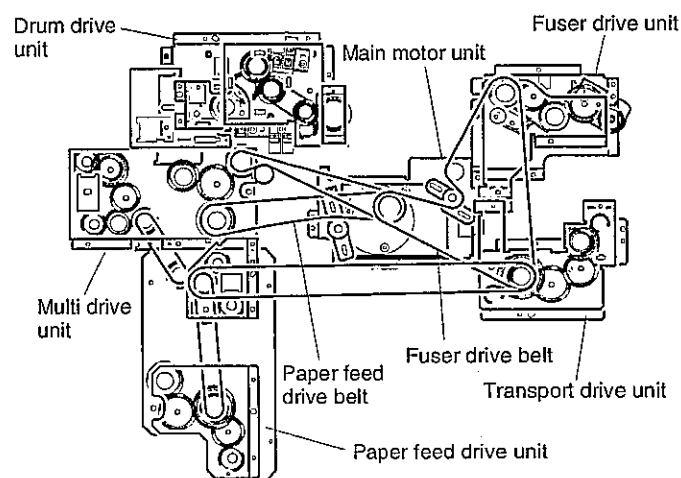
## (2) Door switch removal

- ① Remove door switch ⑥ and door switch ⑦. (2 screws)
- ② Remove commander I/D PWB ⑧. (2 screws)



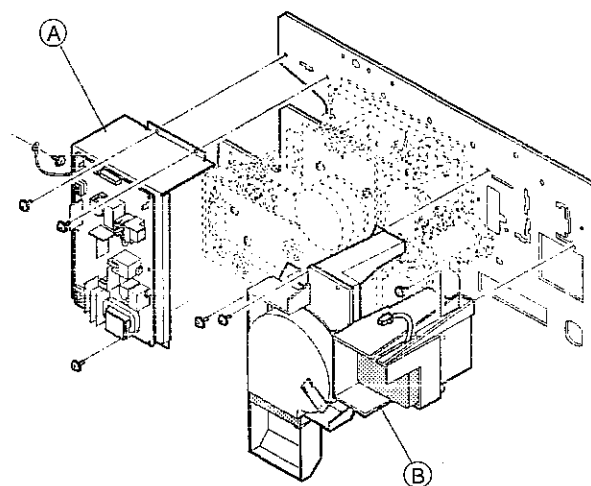
## 4. Drive section

- The drive section is composed of the following six units.

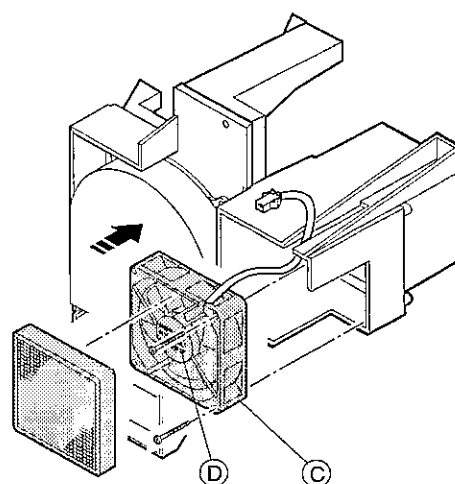


### (1) Drum drive unit

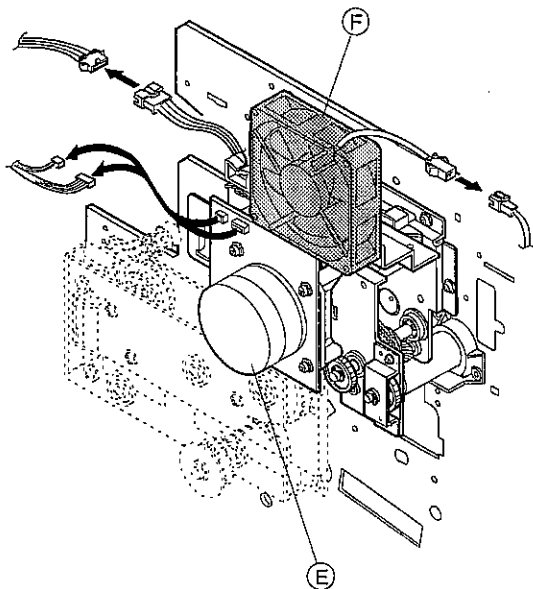
- ① Pull out the duplex/transport unit and the developer unit.
- ② Remove the suction fan duct ⑥. (4 screws, 2 connectors)
- ③ Remove the high voltage PWB mounting plate ⑦. (3 screws, 1 grounding screw, 8 connectors)



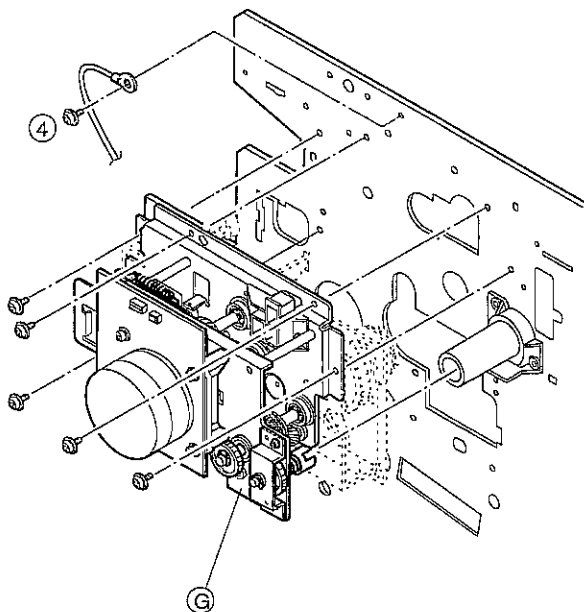
※ When attaching the colling fan to the suction fan duct, place the label ⑥ so that it is on the surface.



- ④ Remove the grounding wire from the high voltage interface harness. (1 screw)
- ⑤ Remove the drum motor harness from the drum motor (E). (2 connectors)
- ⑥ Remove the drum motor harness and the high voltage interface harness from the wire saddle.
- ⑦ Disconnect the connector of the D interface harness. (1 connector)
- ⑧ Disconnect the connector of the cooling fan (F). (1 connector)

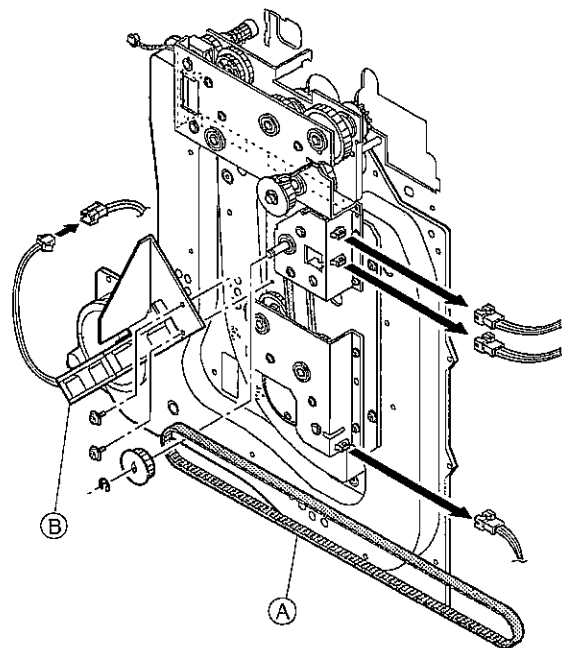


- ⑨ Remove the drum drive unit (G). (5 screws)

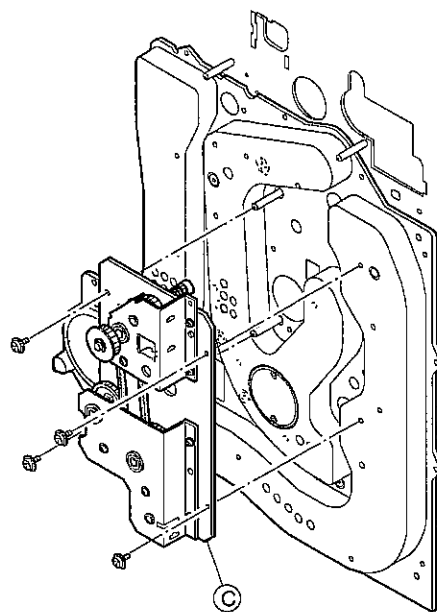


## (2) Paper feed drive unit

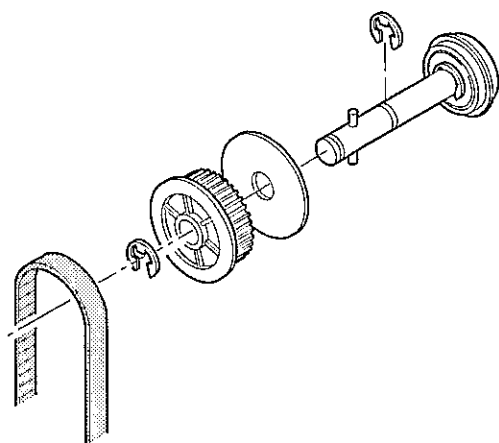
- ① Pull out the duplex/transport unit.
- ② Remove the paper transport drive belt (A).
- ③ Remove the CF mounting plate ass'y (B) from the paper feed drive unit. (2 screws, 1 connector)
- ④ Disconnect the clutch connectors. (3 connectors)



- ⑤ Remove the paper feed drive unit (C). (5 screws)

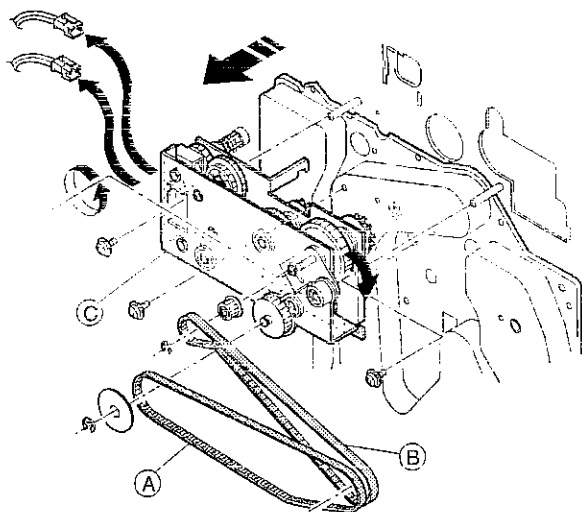


※ Be careful to the installing direction of the 38T pulley.

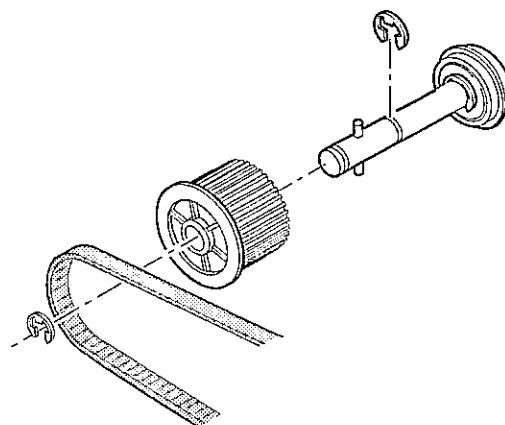


### (3) Multi drive unit

- ① Pull out the intermediate tray unit.
- ② Remove the high voltage PWB mounting plate. (Refer to (1)-(3).)
- ③ Remove the paper transport drive belt (A). (Refer to (2)-(2).)
- ④ Remove the PS drive belt (B).
- ⑤ Disconnect the clutch connector. (2 connectors)
- ⑥ Remove the paper feed drive unit. (Refer to 2.)
- ⑦ Remove the manual paper feed drive unit (C). (3 screws)

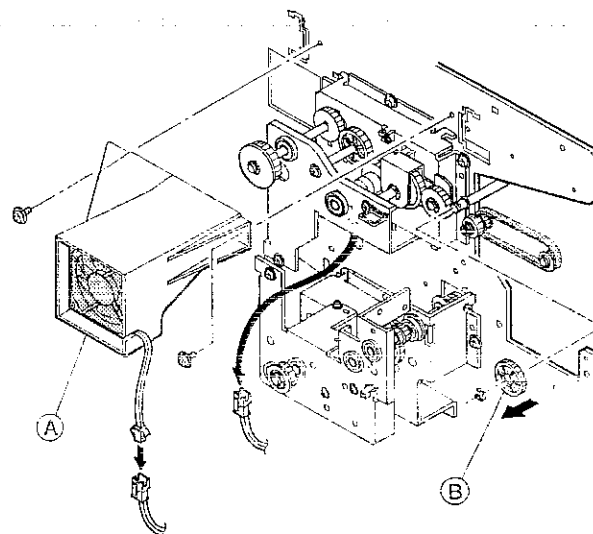


※ Be sure the installing direction of the 37T pulley is correct.

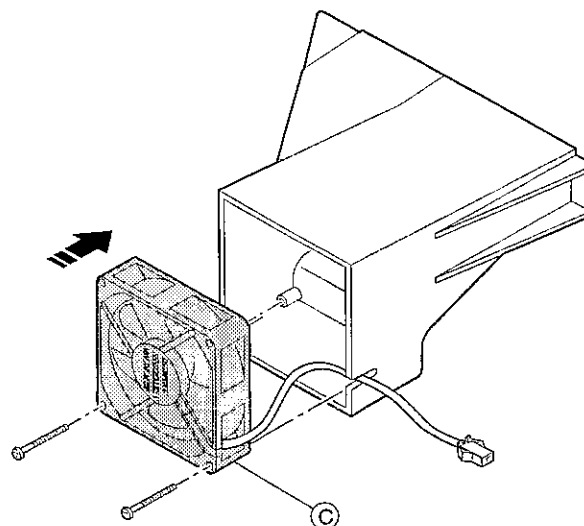


### (4) Fuser drive unit

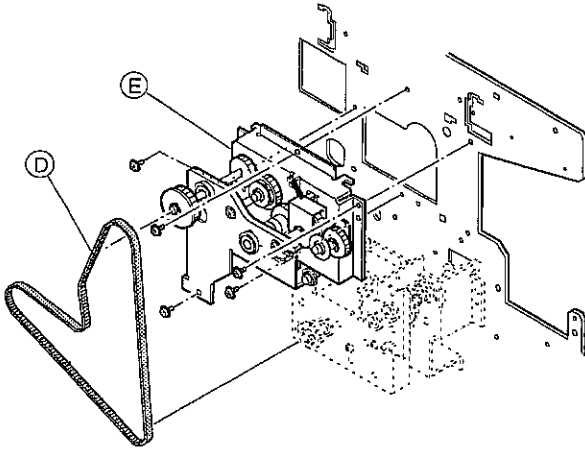
- ① Remove the fuser unit.
- ② Remove the fuser fan duct (A). (2 screws, 1 connector)
- ③ Remove the 37T gear (B) of the paper exit unit. (One E-ring)
- ④ Remove the main body harness from the wire saddle.
- ⑤ Disconnect the connector of the fuser clutch solenoid (1 connector).



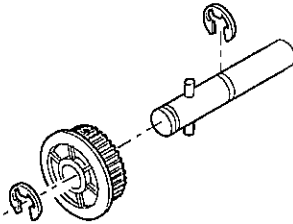
※ When attaching the cooling fan (C) to the fuser fan duct, place the label so that it is on the surface.



- ⑥ Remove the fuser drive belt (D).
- ⑦ Remove the fuser drive unit (E). (5 screws)

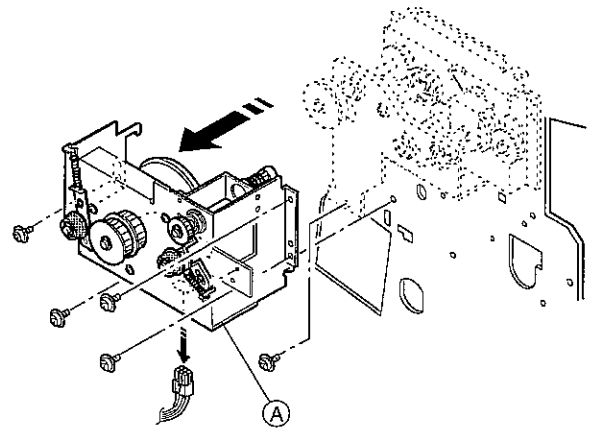


※ Be careful to the installing direction of the 38T pulley. (Refer to (2)-(5).)

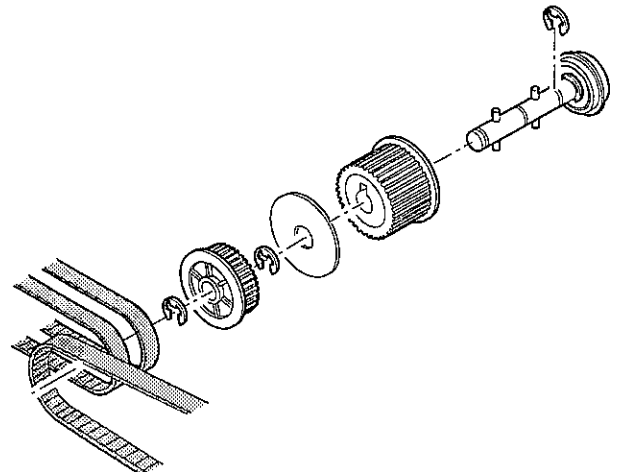


## (6) Main motor unit

- ① Pull out the duplex/transport unit and the fuser unit.
- ② Remove the suction fan duct. (Refer to (1)-(2).)
- ③ Remove the fuser drive belt. (Refer to (4)-(6).)
- ④ Remove the transport drive unit. (Refer to (5).)
- ⑤ Remove the common tightening screw of the fuser drive unit. (1 screw)
- ⑥ Remove the paper feed drive belt. (Refer to (3)-(3).)
- ⑦ Remove the PS drive belt. (Refer to 3-(4).)
- ⑧ Remove the main harness from the wire saddle.
- ⑨ Remove the main motor connector. (1 connector)
- ⑩ Remove the main motor unit (A). (4 screws)

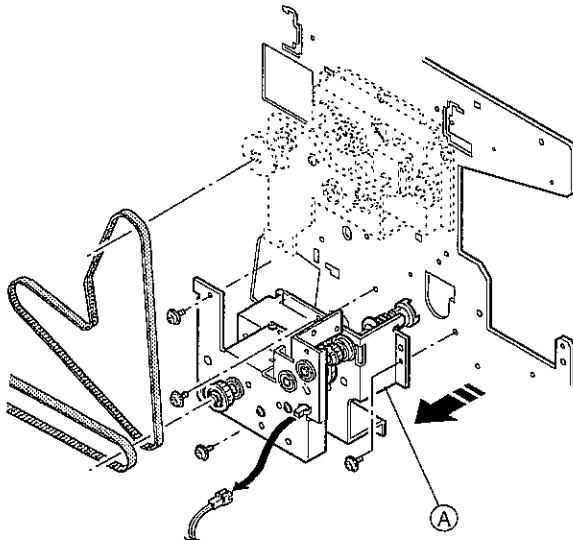


※ Be sure the installing direction of the 38T pulley and 32T pulley.



## (5) Transport drive unit

- ① Pull out the fuser unit.
- ② Remove the fuser drive belt. (Refer to (4)-(7).)
- ③ Disconnect the connector of duplex transport roller clutch. (1 connector)
- ④ Remove the transport drive unit (A). (4 screws)

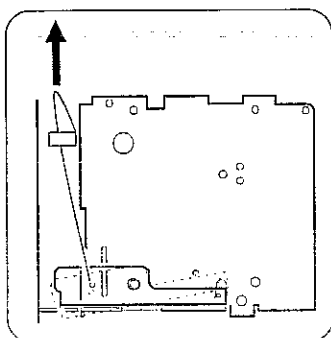
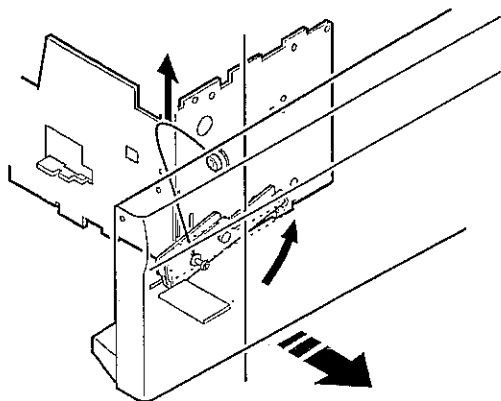


※ Be careful to the installing direction of the 30T pulley.

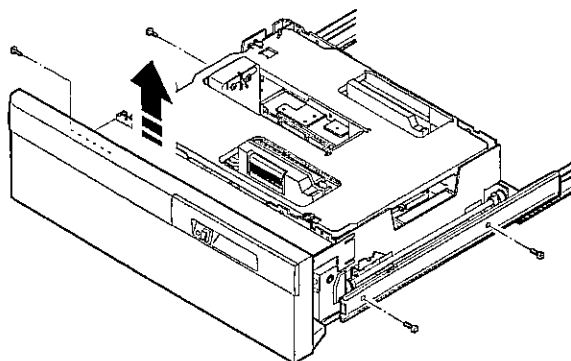
## 5. 1000-sheet tray unit

### (1) Tray unit removal

- ① Remove the front cabinet (left).
- ② Lift the tray lock release wire and release the lock.

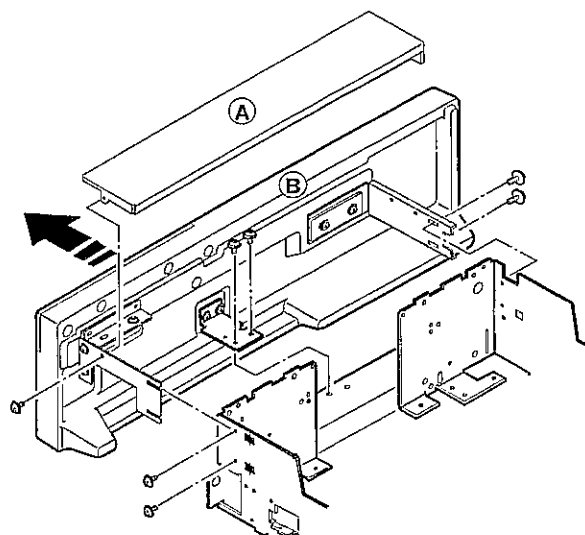


- ③ Pull out the tray unit.
- ④ Remove four fixing screws of the tray unit, and remove the unit from the rail.

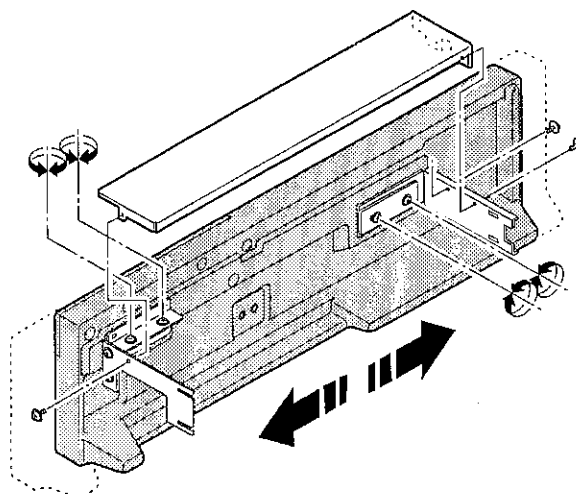
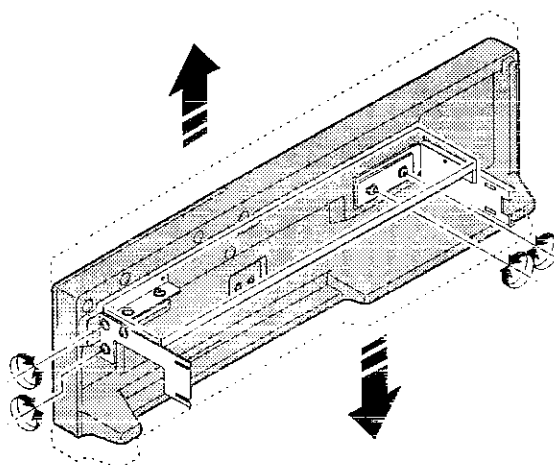


### (2) Tray front fitting removal

- ① Remove tray intermediate cabinet (A). (3 screws)
- ② Remove tray front fitting (B). (6 screws)

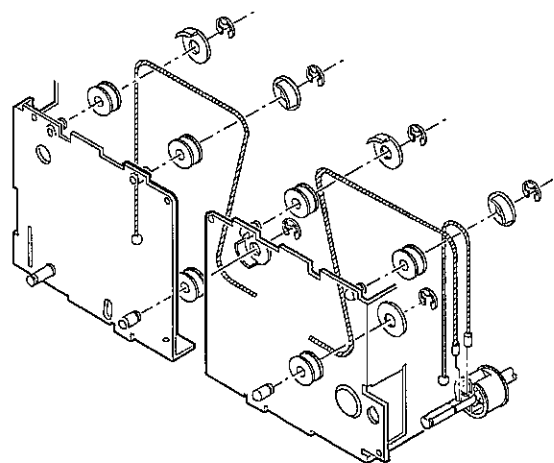
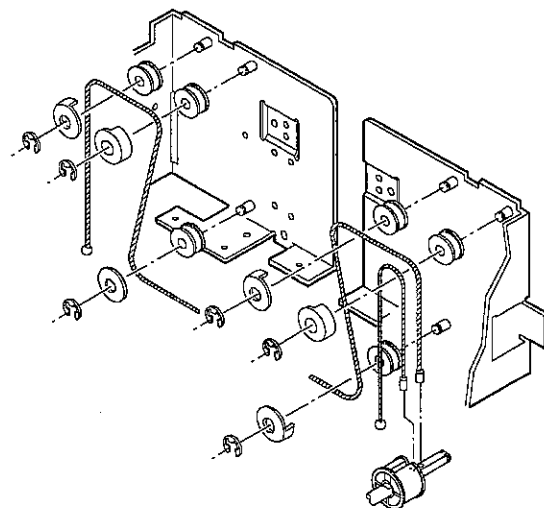
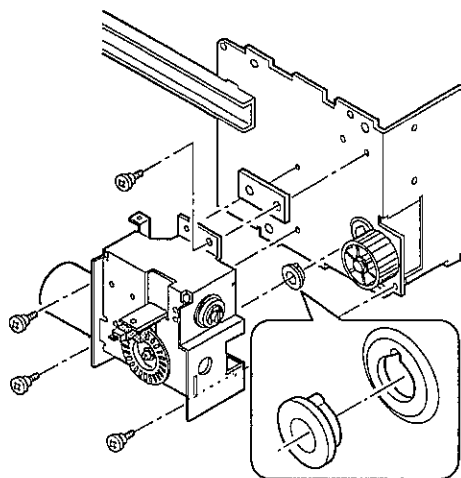
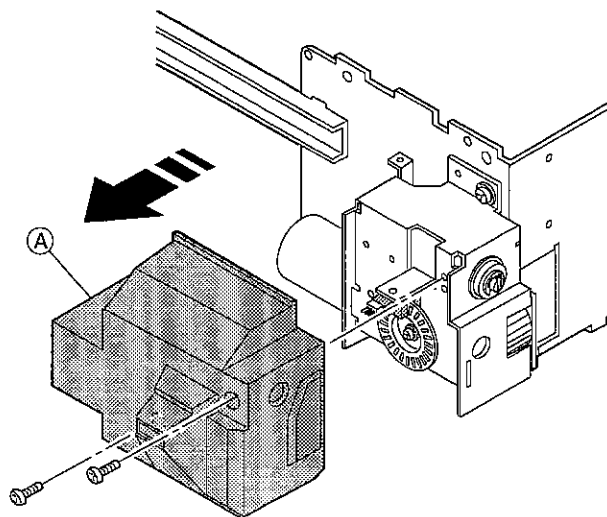


※ When attaching the tray front fitting, loosen the fixing screws of the other fittings and adjust so that there are no clearance and protrusion among them.



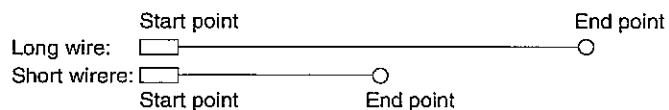
### (3) Lift motor drive unit removal

- ① Remove the tray front fitting.
- ② Remove the lift motor drive unit cover (A). (2 screws)
- ③ Remove the motor drive unit. (4 screws)



### (4) Tray lift wire stretching

For the tray lift wires, two kinds of wire are used in the front and the rear frames.

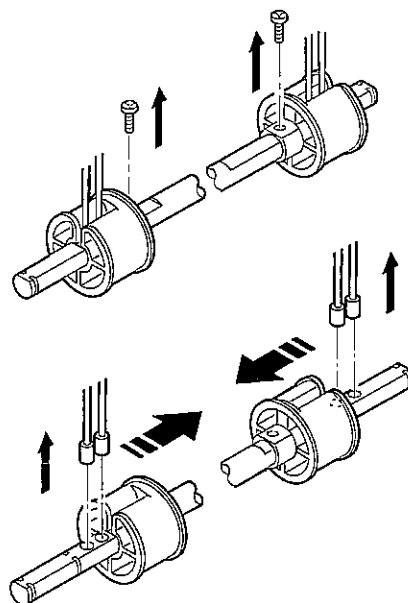


#### (Long wire)

- ① Insert the wire (start point) into the wire stop plate (front and rear) hole and stretch the wire as shown in the figure.
- ② After inserting the wire start point into the wire winding shaft hole, slide the wire winding pulley to fix the wire start point.

#### (Short wire)

- ③ Insert the wire (start point) into the tray bottom plate hole (front and rear) and stretch the wire as shown in the figure.
- ④ After inserting the wire start point into the wire winding shaft hole, slide the wire winding pulley to fix the wire start point.
- ⑤ Fix the wire winding pulley (front and rear). (1 screw each)

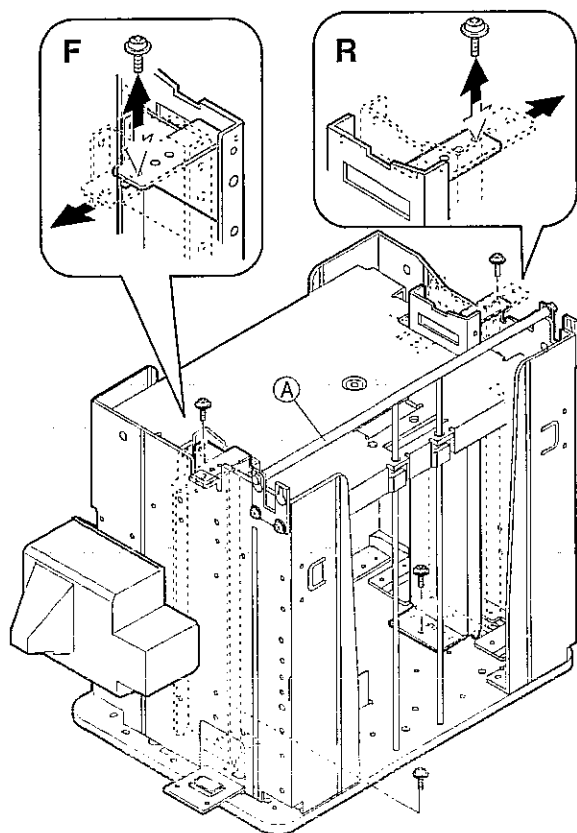


## 6. 2000-sheet tray unit

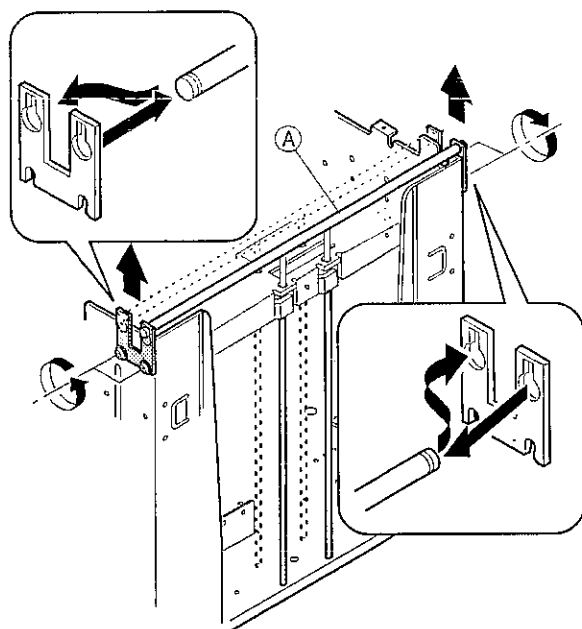
### (Paper size selection)

\* For BG shaft ass'y (A), use A4 or B5 only.

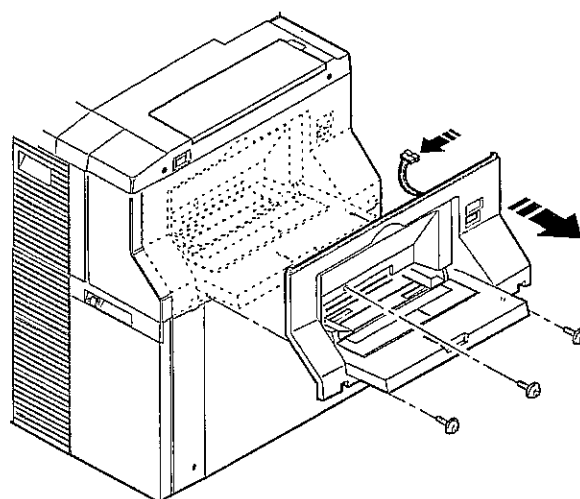
- ① Set the size guide F and R ass'y to the specified paper size.



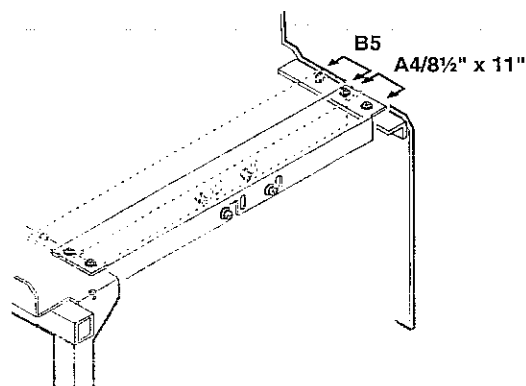
- ② Set the BG shaft ass'y (A) to the specified paper size. (In the case of 8 1/2" x 11", remove the BG shaft.)



- ③ Remove the right cabinet (left). (2 screws)



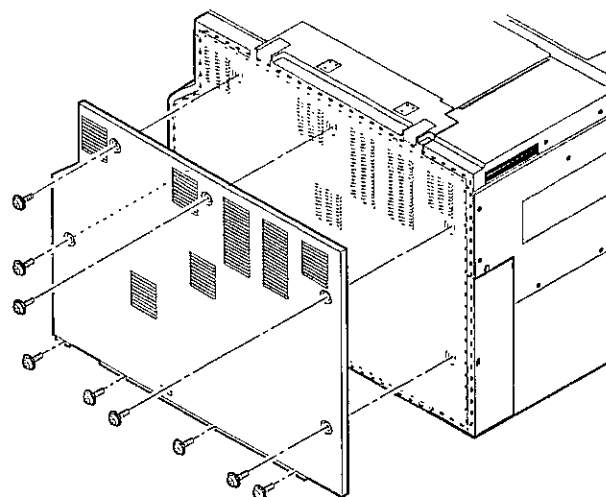
- ④ Set the paper feed tray rising sensor (TUD1) mounting plate to the specified paper size.



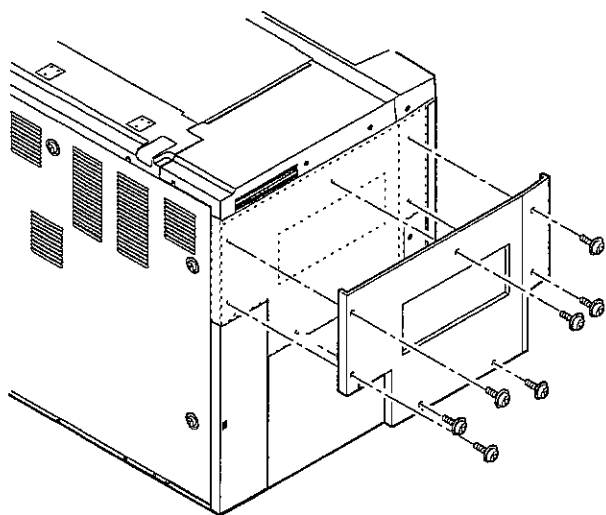
## 7. Paper exit unit

### (1) External fitting removal

- ① Remove the front cabinet (left).  
② Remove the rear cabinet. (9 screws)

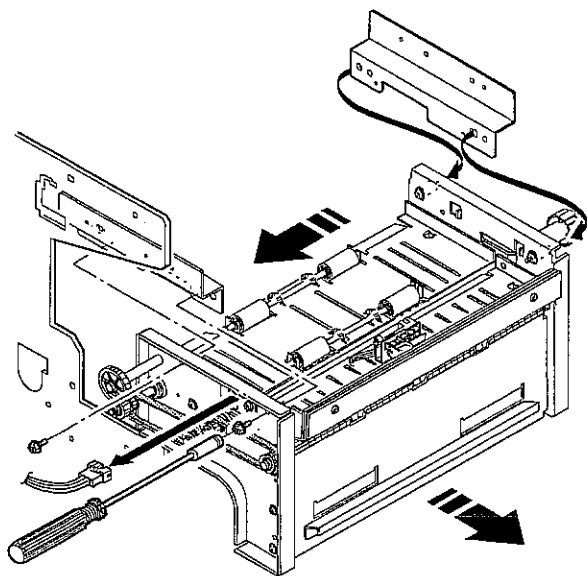


- ③ Remove the paper exit section cabinet. (7 screws)



## (2) Unit removal

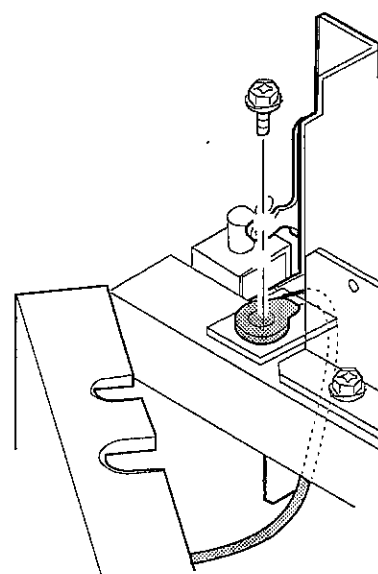
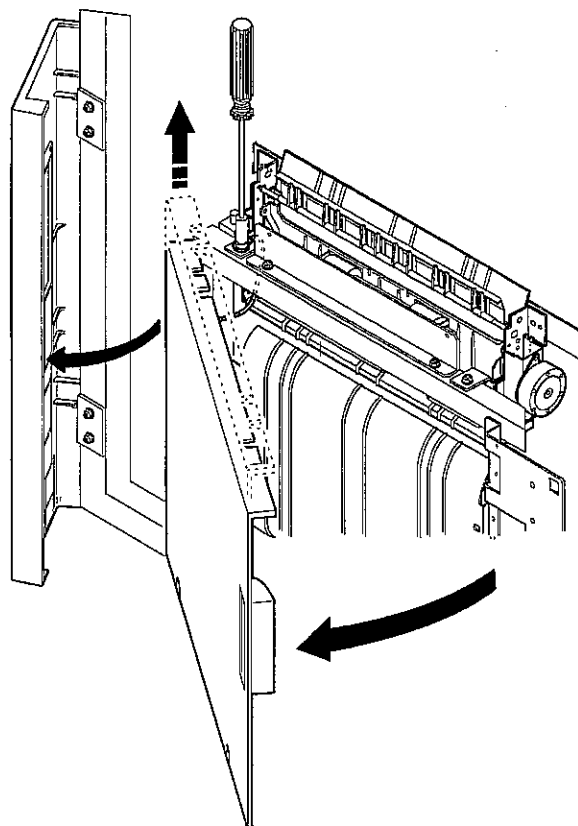
- ① Disconnect the 5 pin connector in the rear frame side.
- ② Pull out the fuser unit.  
Remove the hex screws (2 pcs.) which are fixing the paper exit unit in the rear frame side.  
※ Use a box-wrench.
- ③ Shift the paper exit unit to the rear frame side, and remove it from the front frame side fixing shaft.



## 8. Switchback (reverse) unit

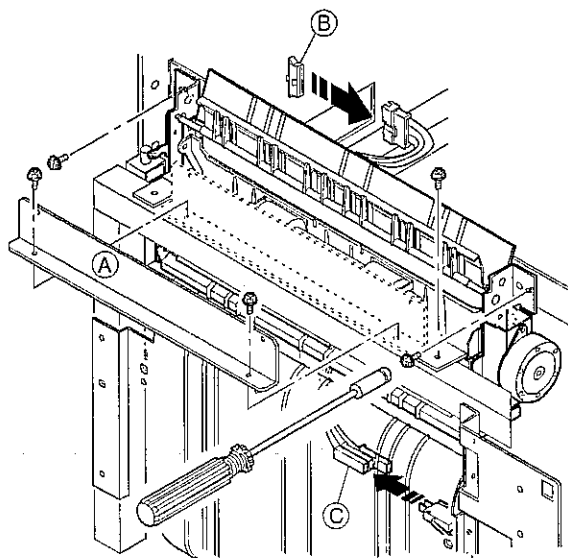
### (1) External fitting removal

- ① Remove the front cabinet (left).
- ② Remove the rear cabinet. (9 screws)
- ③ Remove the paper exit cabinet. (7 screws)
- ④ Remove the left cabinet (lower). (Wire fixing screw, 1 pc.)



## (2) Unit removal

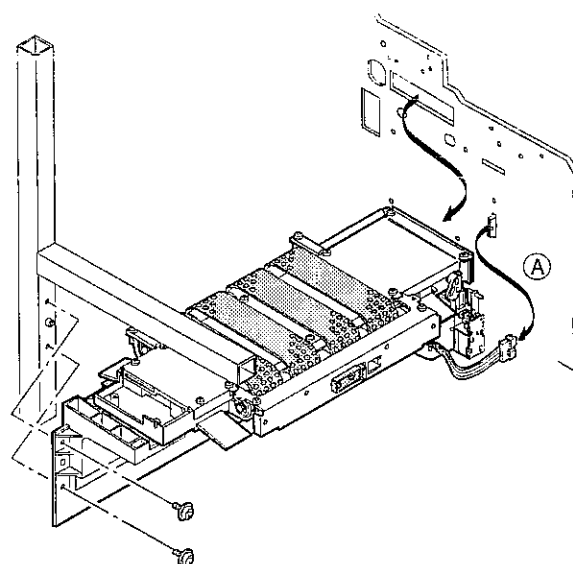
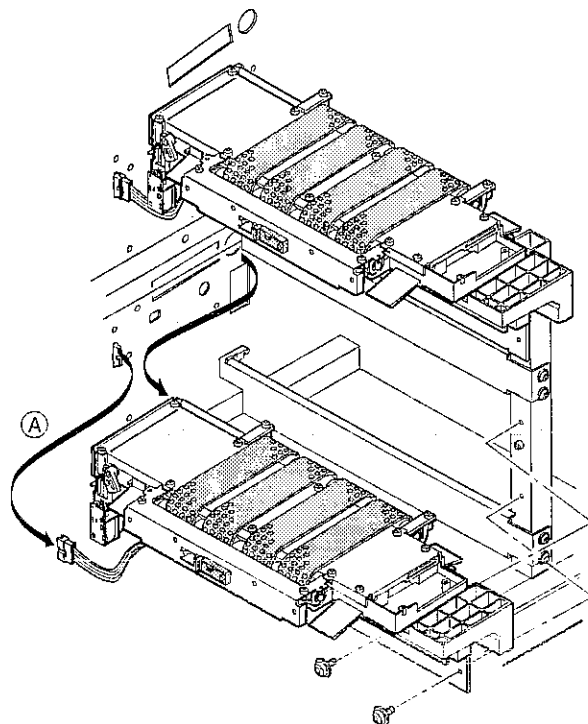
- ① Remove the paper exit unit.
- ② Pull out the 1000-sheet paper feed tray (No. 2).
- ③ Remove the left cabinet (upper) mounting plate (A). (2 hex screws)
- ④ Disconnect 10 pin connector (B) in the rear frame side and the duplex copy tray door switch (DDSW) 2 pin connector (C).
- ⑤ Remove the switchback unit fixing hex screws (4 pcs.) and remove the unit.



## 9. Air paper feed unit

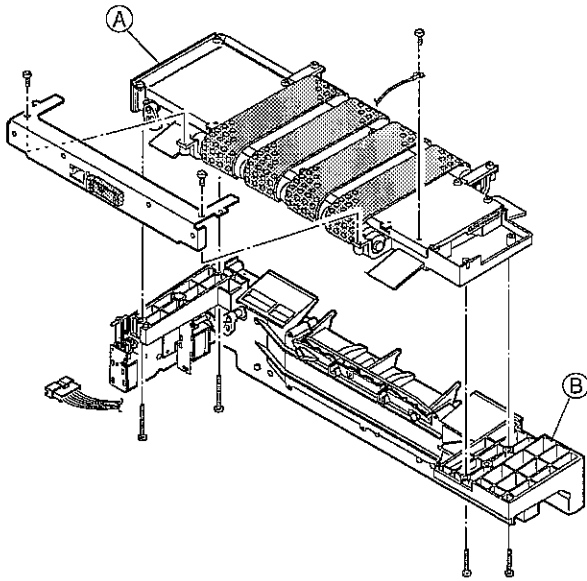
### (1) Air paper feed unit removal (For No. 1, No. 2, N. 3 tray)

- ① Open the front cabinet (L and R).
- ② Remove the paper feed tray unit from the main body.
- ③ Remove the air paper feed unit fixing screws (2 pcs.).
- ④ Disconnect the rear frame side 8 pin connector (A), and remove the unit.

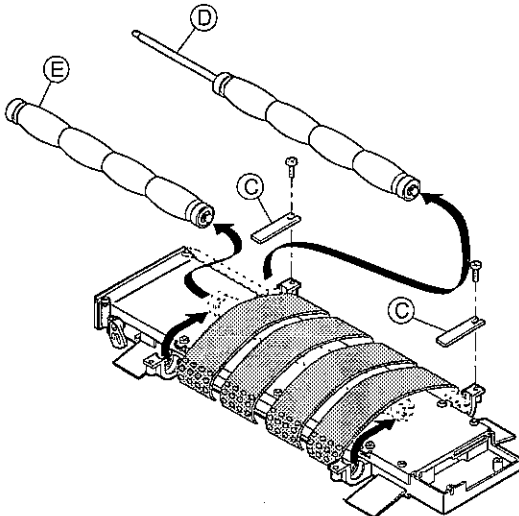


## (2) Air paper feed unit paper feed belt removal

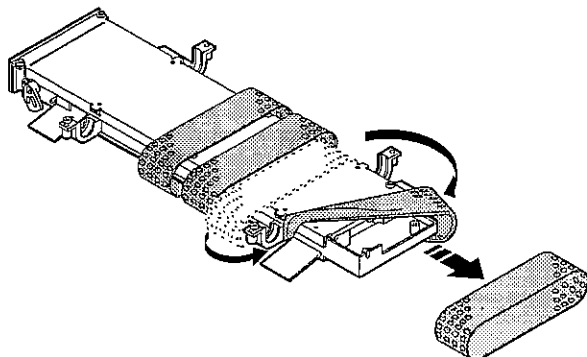
- ① Separate the suction duct unit (A) and the blower duct unit (B). (4 screws)
- ② Remove the paper feed tray upper limit sensor (TLMD) mounting plate. (2 screws)



- ③ Remove the mounting screw of the paper feed belt drive shaft bearing pressing plate (C). (2 screws)
- ④ Remove the paper feed belt drive shaft (D) and the follower shaft (E) from the duct unit.



- ⑤ Remove the paper feed belts (4 pcs.) from the suction duct unit (front frame side).

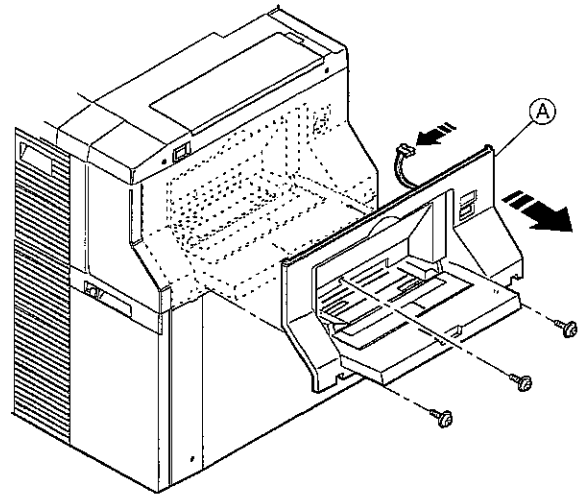


When replacing the paper feed belts, replace all the four belts at the same time.

## 10. Manual paper feed base unit

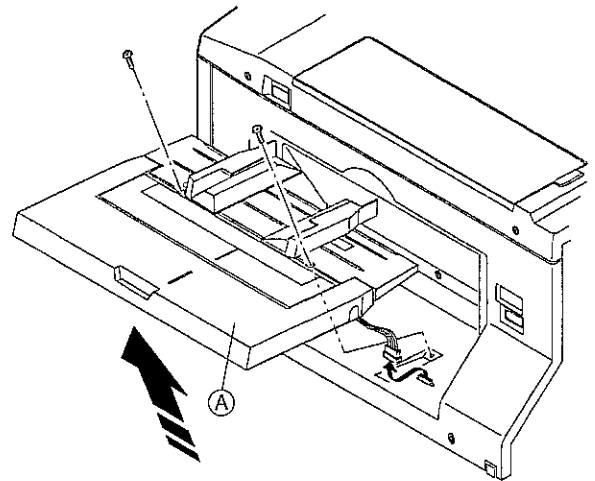
### (1) Unit attachment and removal

- ① Remove the three screws, and disconnect 7 pin connector which is connected to the chassis from the right side of the manual paper feed base unit.
- ② Remove the unit (A).



### (2) Manual paper feed tray removal

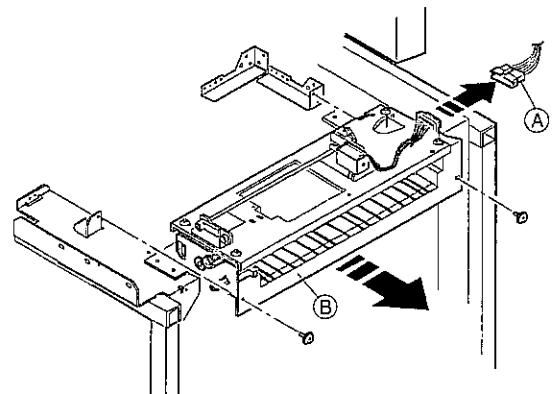
- ① Remove the two screws.
- ② Disengage the four pawls in the back of the manual paper feed tray (A) from the four holes in the manual paper feed base unit, and remove the manual paper feed tray (A).



## 11. Multi paper feed unit

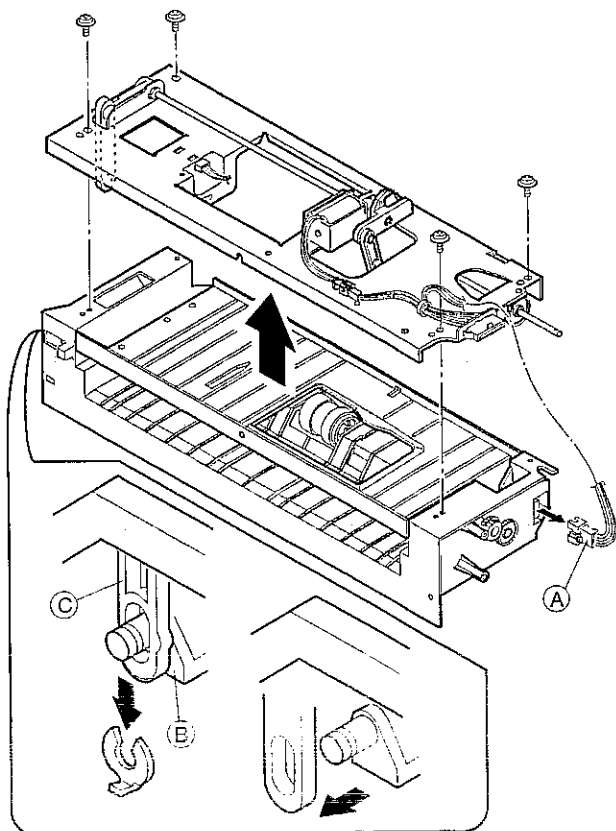
### (1) Unit attachment and removal

- ① Remove the manual paper feed base unit.
- ② Remove the multi paper feed unit and the main harness connector (A), and remove the unit (B). (2 screws)



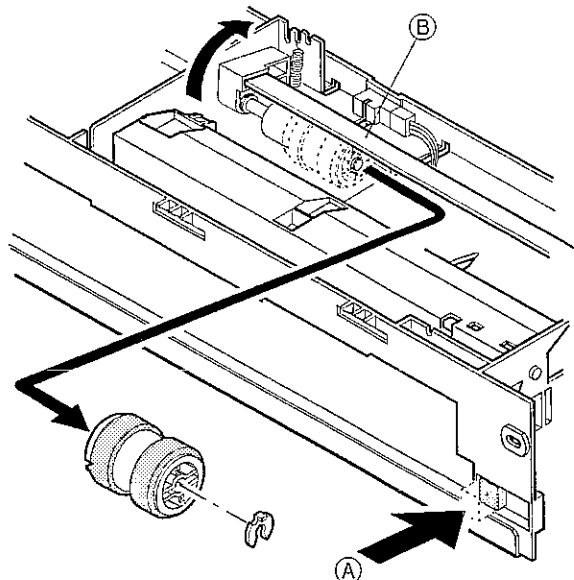
## (2) Paper feed connecting plate ass'y removal

- ① Remove the unit.
- ② Disconnect the paper entry sensor (MPFD) connector (A).
- ③ Remove the stopper at the connecting section of the gate (B) and the G drive arm 2 (C).
- ④ Remove the four screws, and remove the paper feed connecting plate ass'y.



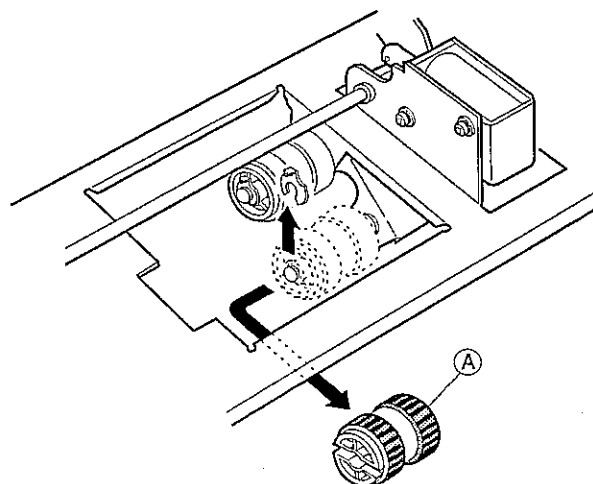
## (3) Reverse roller and torque limiter removal

- ① Remove the multi paper feed unit.
- ② Remove the reverse roller stopper.
- ③ Press the pressure release lever (A) to release the roller pressure.
- ④ While pressing the pressure release lever, remove the reverse roller and the torque limiter.
- ⑤ While pressing the pressure release lever, insert a new roller and a new limiter. In this case, be careful not to scratch the roller with the release plate (B). If necessary for easy operation, you may remove the release plate (B).



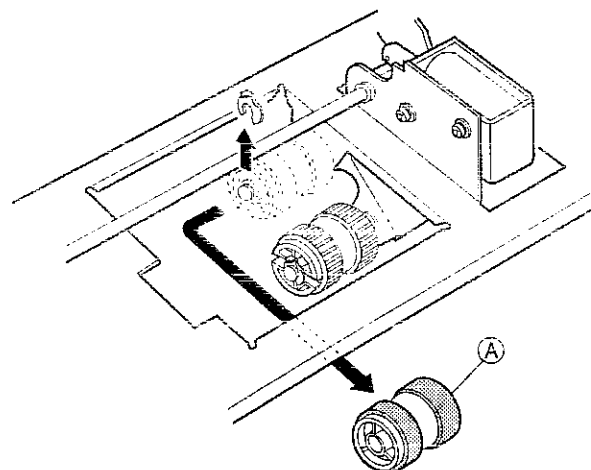
## (4) PU roller removal

- ① Remove the multi manual paper feed unit.
- ② Remove the paper feed connecting plate ass'y.
- ③ Remove the stopper which is fixing the PU roller.
- ④ Remove the PU roller (A).



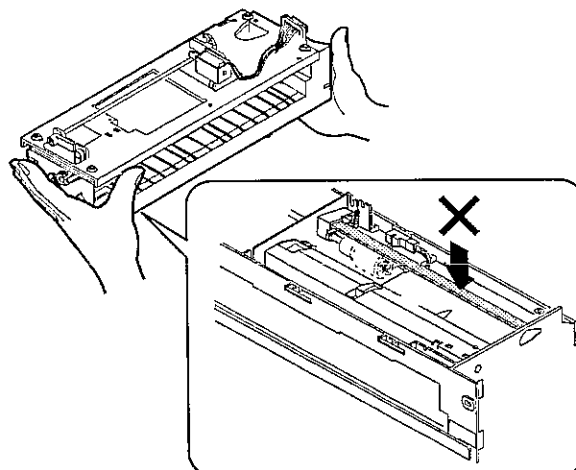
## (5) Paper feed roller removal

- ① Remove the multi manual paper feed unit.
- ② Remove the paper feed connecting plate ass'y.
- ③ Remove the stopper which is fixing the paper feed roller.
- ④ Remove the paper feed roller (A).

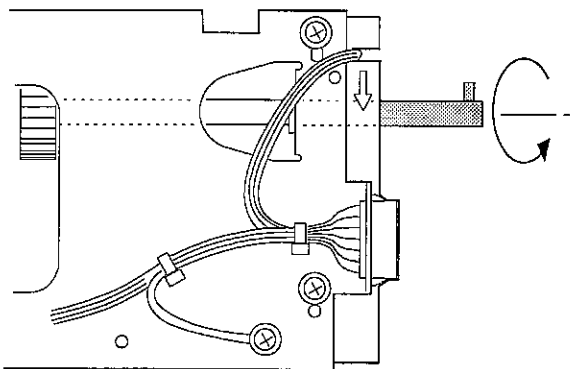


## (6) Other notes

- Use a great care to handle the roller. (dirt, breakage, etc.)
- When lifting the multi paper fed unit, hold the release plate in the bottom of the unit and be careful not to deform it.

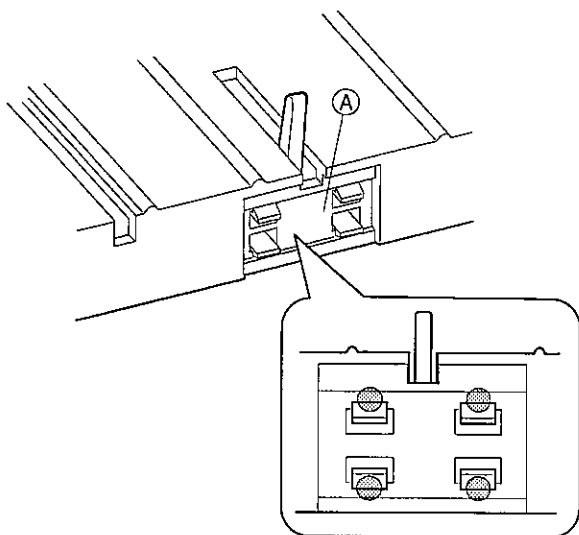


- When rotating the paper feed shaft, be careful to the rotating direction. If it is rotated reversely, the regulating spring may be deformed or disengaged.

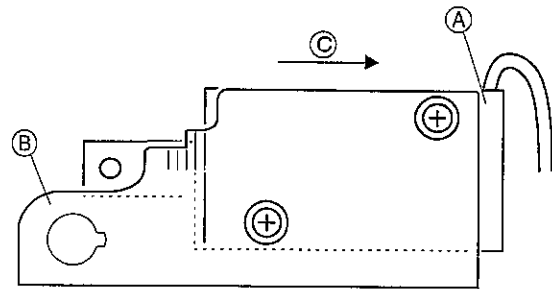


#### MPFD attachment

Insert MPFD (A) into the specified hole, apply screw lock (as much as a sesame seed) to the detachable section. (4 shaded positions in the figure)

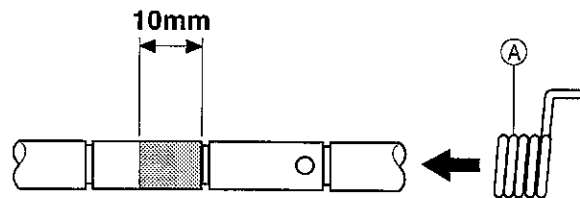


#### ③ Multi solenoid attachment

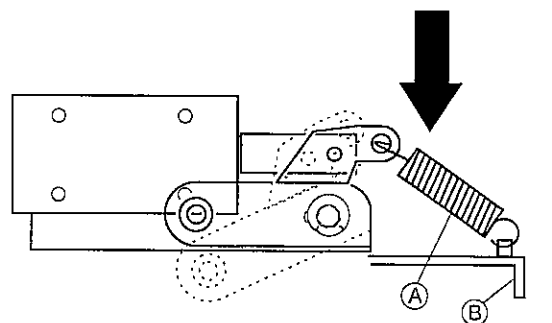


Shift the multi solenoid (A) completely in the direction (C) and fix it with screws.

#### ④ Regulating spring (A) attachment

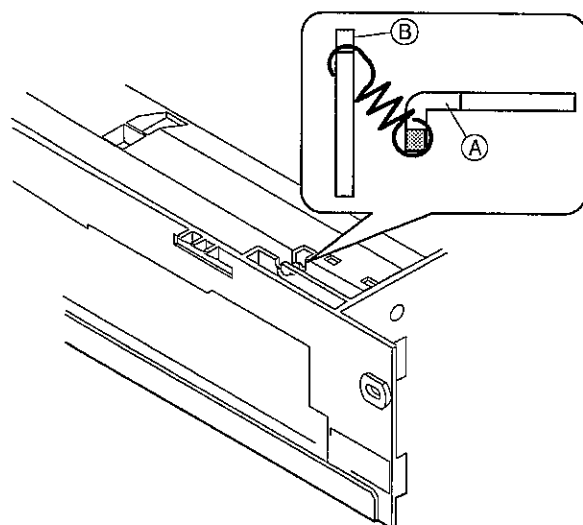


#### ⑤ PU arm spring (A) attachment



Engage the PU arm spring (A) hook with the paper feed connecting plate (B). Then keep pressing the PU arm and engage the other hook.

#### ⑥ Gate spring attachment

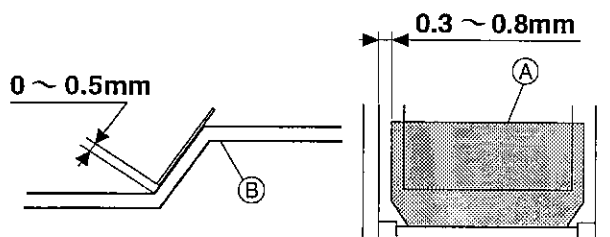


Hang the hook on the gate (A) as shown in the figure, hang the other hook on the paper feed base plate (B).

### (7) Note for single parts assembly

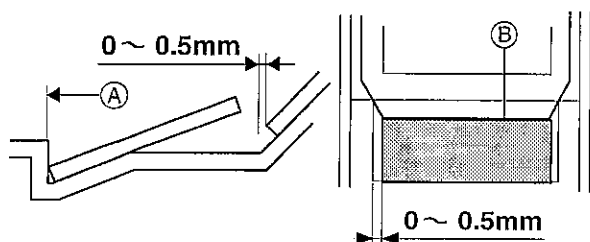
#### ① Pat mylar (A) attachment

Attach the paper feed base plate (B) as specified below:

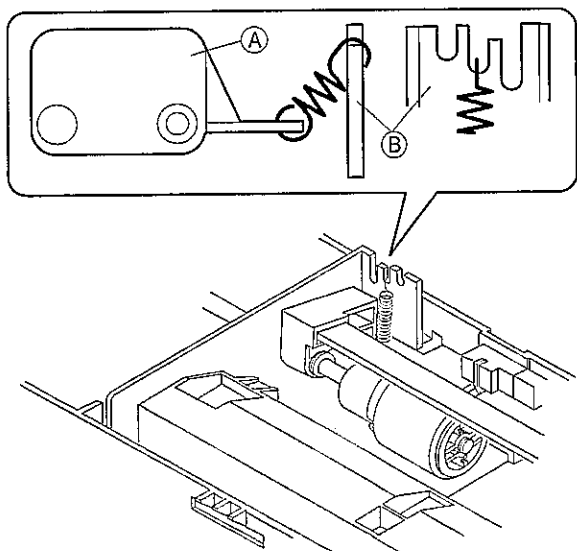


#### ② PG pad attachment

Attach PG pad (B) completely to line (A).

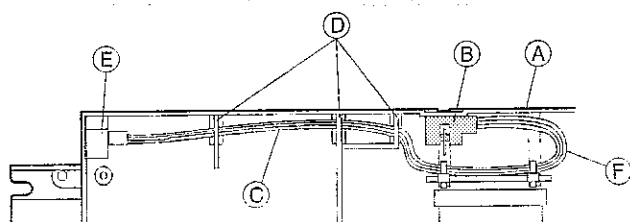


## ⑦ Pressure spring attachment



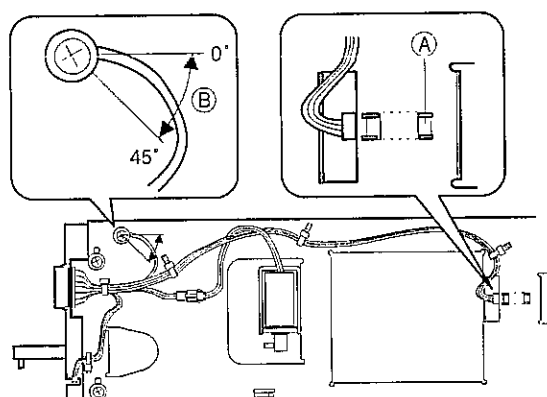
Hang the hook on the reverse plate (A) as shown in the figure, and attach the other hook on the paper feed base plate (B) the concave section at the center.

## ⑧ MPFD interface harness attachment



Attach the MPFD (B) to the paper feed base plate (A), and connect the MPFD interface harness (C) connector. Pass the other edge of harness connector under the ribs (3 positions) of the paper feed base plate, and insert the connector (E) into the fixing hole. Allow a clearance of 5 mm or more between the MPFD and the convex section (F), and fix the convex section as shown in the figure. (2 positions)

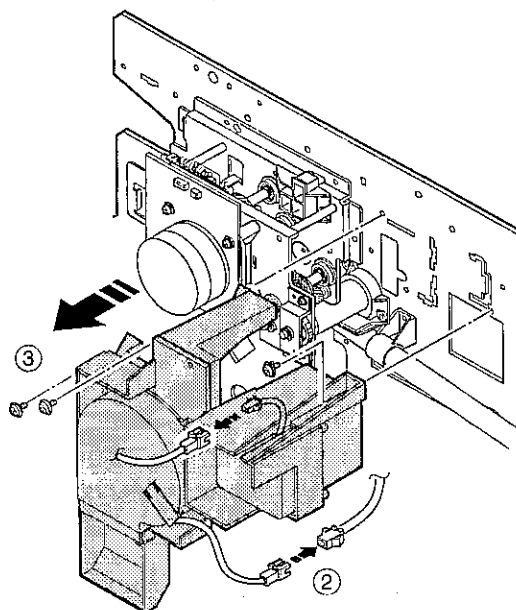
## ⑨ Manual paper feed unit harness attachment



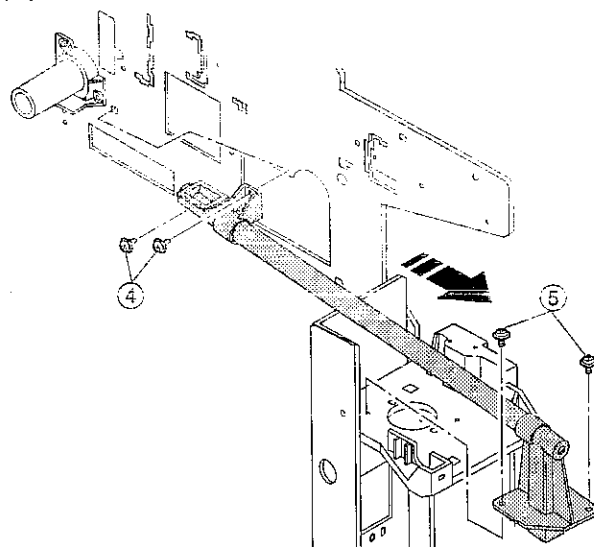
- ※ Leave 5 mm (max.) of each snap band (4 pcs.) after cutting.
- ※ Apply a small quantity of screw lock (as much as a sesame seed) to the detachable section (A) of the photo sensor. (1 position)
- ※ The grounding wire mounting angle (B) must be in the range of 0° ~ 45°.

## 12. Waste toner unit

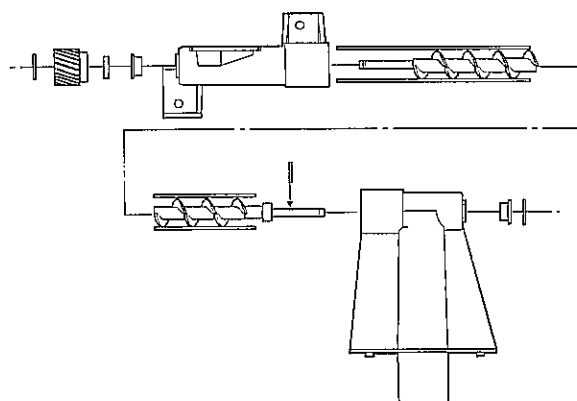
- ① Remove the left cabinet and the rear cabinet.
- ② Disconnect the fan connectors (2 pin x 2) from the suction duct.
- ③ Remove the suction duct. (4 screws)



- ④ Remove the waste toner pipe joint mounting screws (2 pcs.).
- ⑤ Remove the waste toner exit port connection port mounting screws (2 pcs.) and remove the waste toner pipe unit from the paper exit side of the main body.



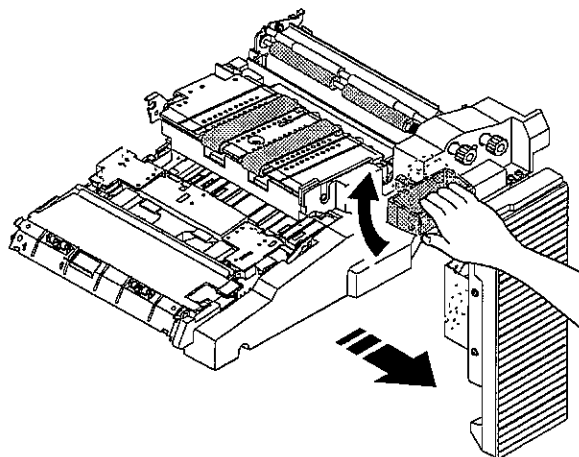
## ⑥ Waste toner pipe component parts attachment



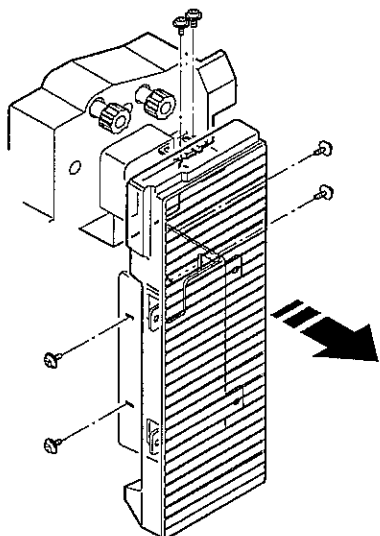
## 13. Intermediate tray unit

### (1) Intermediate tray unit removal

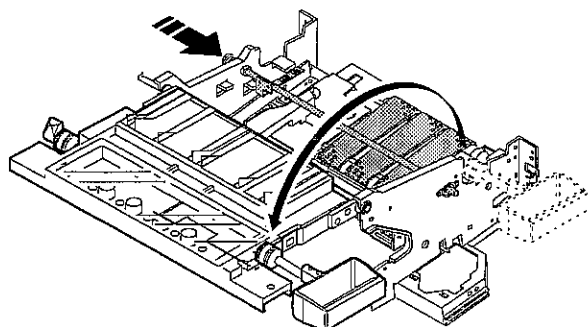
- ① Pull out the intermediate tray unit.



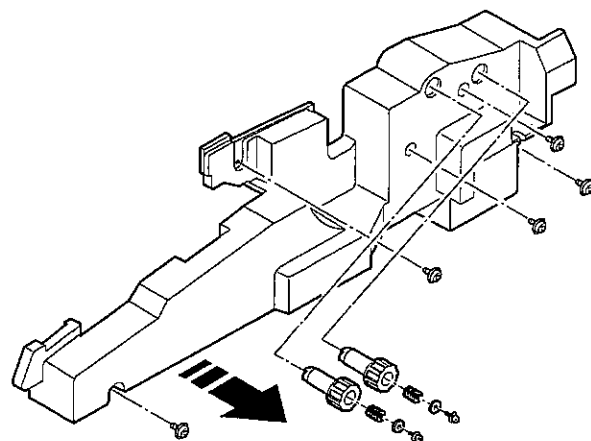
- ② Remove the transport unit front cabinet. (6 screws)



- ③ Reverse the suction unit and remove the manual knob. (1 screw each)

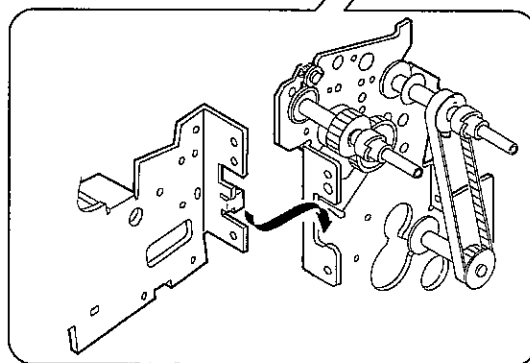
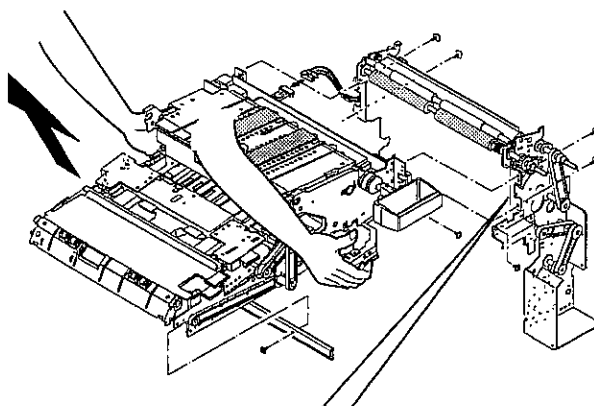


- ④ Remove the intermediate tray unit front cover. (5 screws)



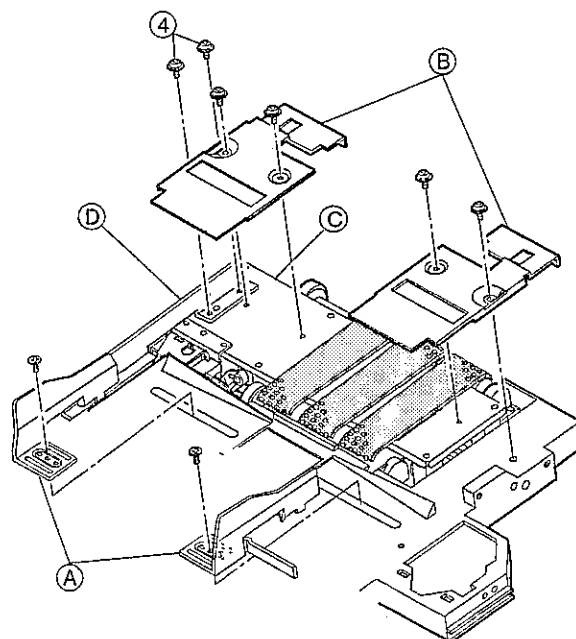
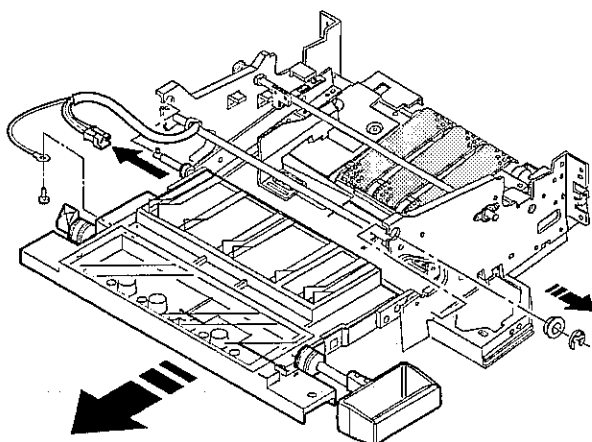
- ⑤ Remove the intermediate tray unit fixing screws (7 pcs.).

- ⑥ Lift the intermediate tray unit to the paper exit side, and separate it from the transport unit.



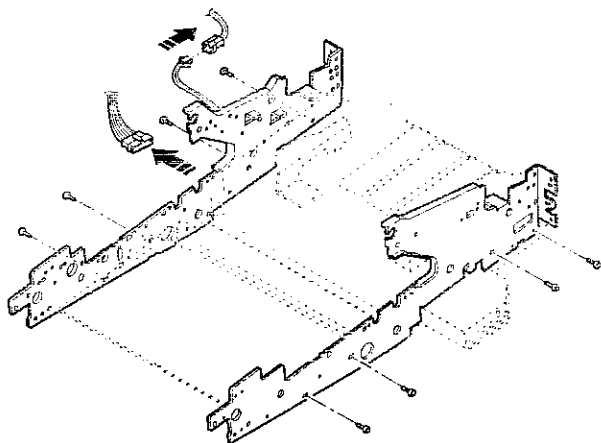
## (2) Suction unit removal

- ① Reverse the suction unit.
- ② Remove the ball bearing in the front side. (E ring, 1 position)
- ③ Remove the suction unit. (1 pc. of E-ring, 1 pc. of grounding screw)

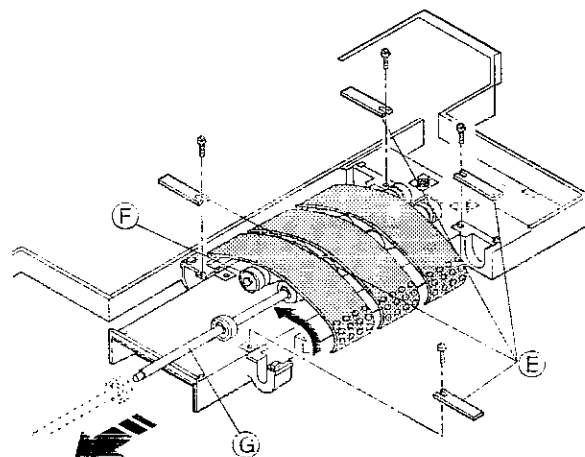


## (3) Paper feed belt removal

- ① Remove the intermediate tray unit. (Refer to (1).)
- ② Remove the paper feed tray unit from the duplex copy tray. (8 screws, 2 connectors)

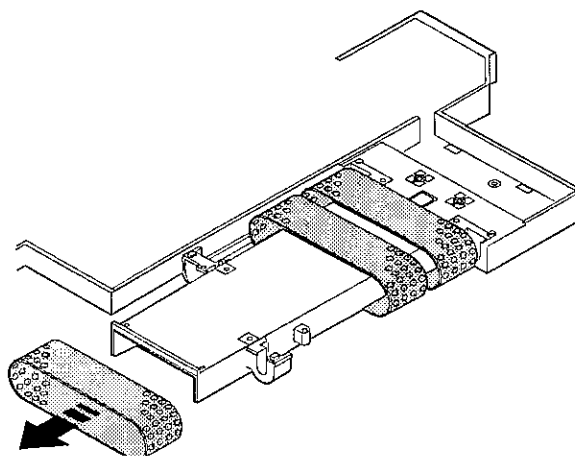


- ⑥ Remove the bearing holder ⑤ and remove the paper feed follower shaft ⑥ and the paper feed drive shaft ⑦. (4 screws)

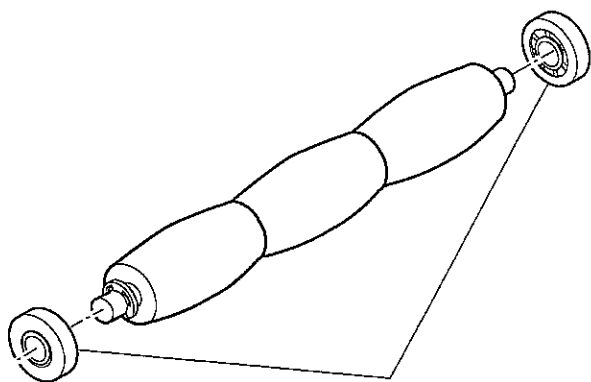


- ⑦ Remove the paper feed belt.

- ③ Remove the alignment plates F and R ④. (one screw for each)
- ④ Remove the paper exit plates F and R ⑤. (one screw for each)
- ⑤ Remove the fixing screws of the suction duct ⑥ and the duct holding plate ⑦. (3 screws)

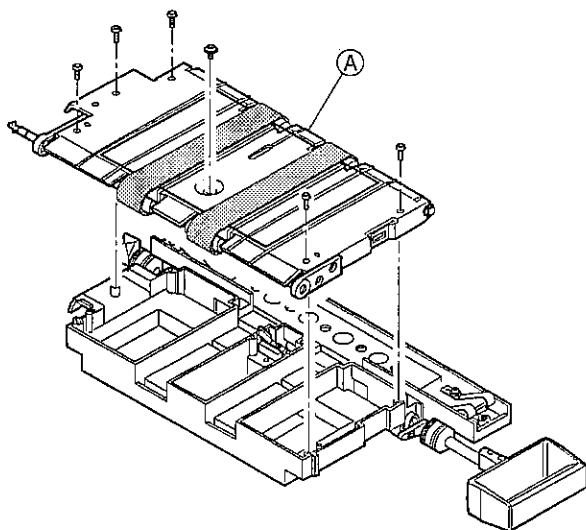


※ When attaching the paper feed bearing, be careful to the installing direction.

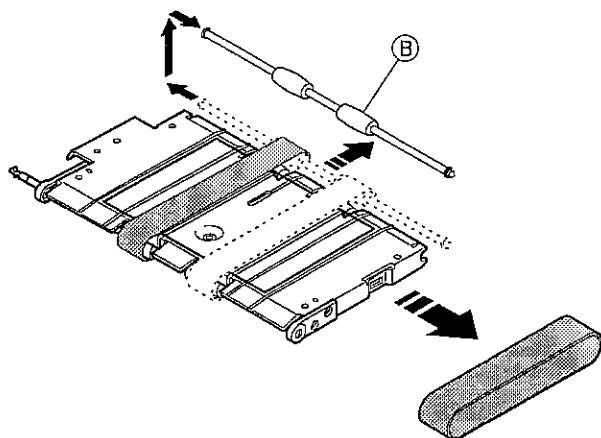


#### (4) Suction belt removal

- ① Reverse the suction unit.
- ② Remove the suction PG (A). (5 screws)



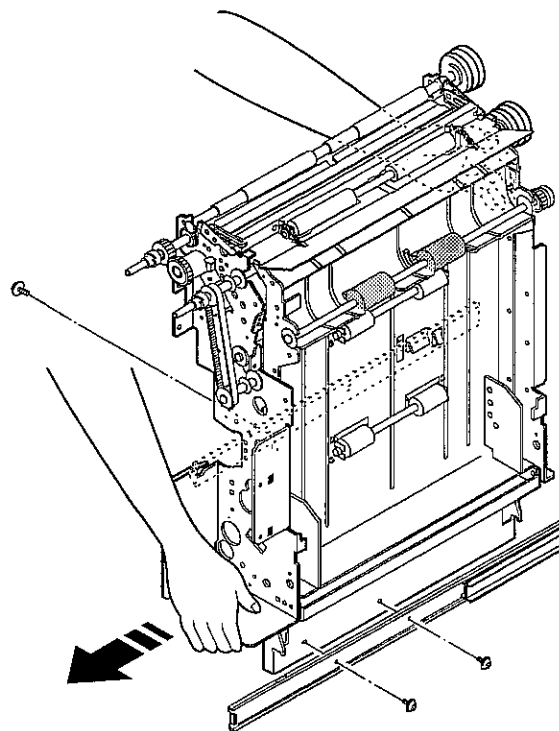
- ③ Remove the belt drive shaft (B) and remove the suction belt.



## 14. Transport unit

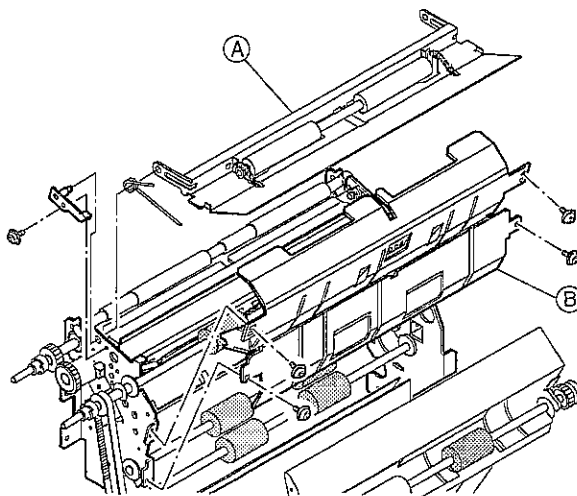
### (1) Transport unit removal

- ① Remove the duplex copy tray unit. (Refer to 3. Duplex tray unit.)
- ② Remove the transport unit. (3 screws)

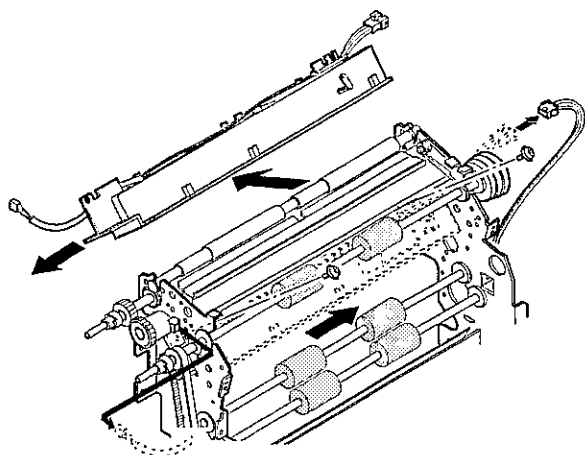


### (2) Blower duct unit removal

- ① Remove the duplex copy tray unit.
- ② Remove the transport paper guide (A). (1 screw)
- ③ Remove the transport paper guide B and C (B). (4 screws)

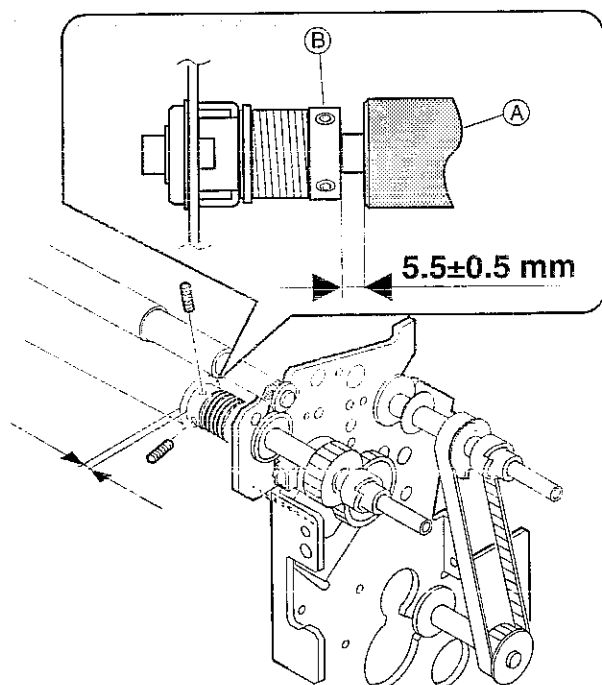


- ④ Remove the duct solenoid. (2 screws, 7 connectors)



- ⑤ Remove the suction duct unit. (2 screws, 2 connectors)

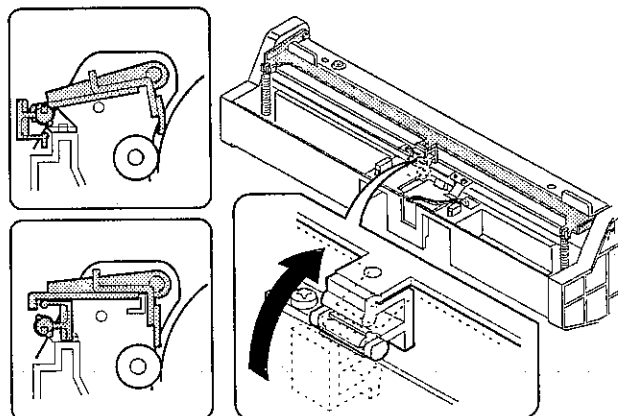
※ Keep the clearance between PS roller (A) and brake adjustment collar (B) to 5.5 mm  $\pm$  0.5.



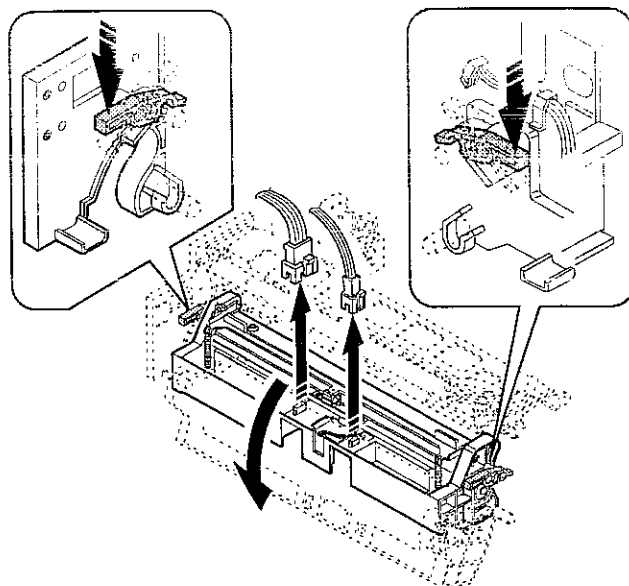
## 15. Process unit

### (1) Cleaner unit removal

- ① Open the front cabinet (left and right).
- ② Remove the developer unit.
- ③ Turn the transport section open/close lever clockwise to release pressure contact with the process unit.
- ④ Loosen the process unit fixing screws (2 pcs.) and pull out the process unit.
- ⑤ Release the pressure of the cleaning blade.

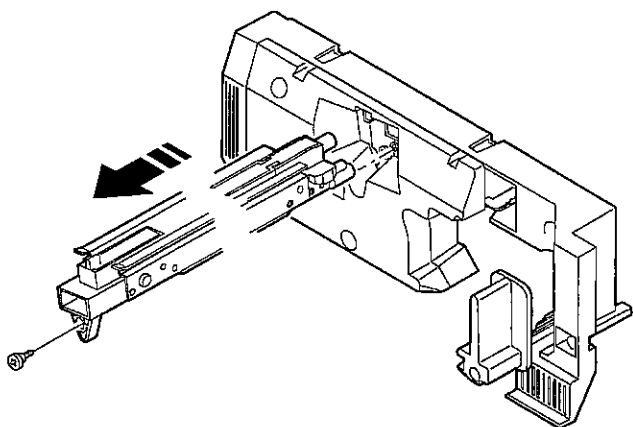


- ⑥ Disconnect the process control sensor connector (4 pin) and the process separation pawl drive solenoid connector (3 pin).
- ⑦ Release locking of the cleaner unit (front and rear). Turn the cleaner unit to the fuser side and remove the cleaner unit from the process unit.

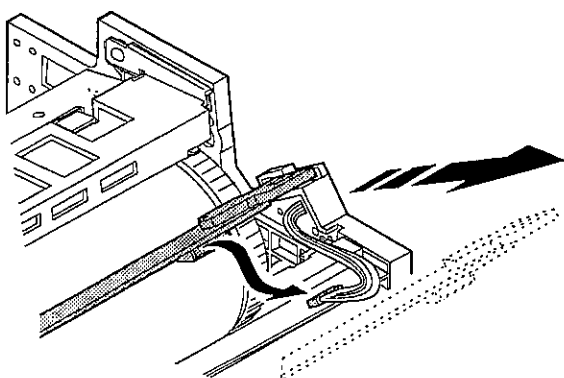


## (2) Photoconductor drum removal

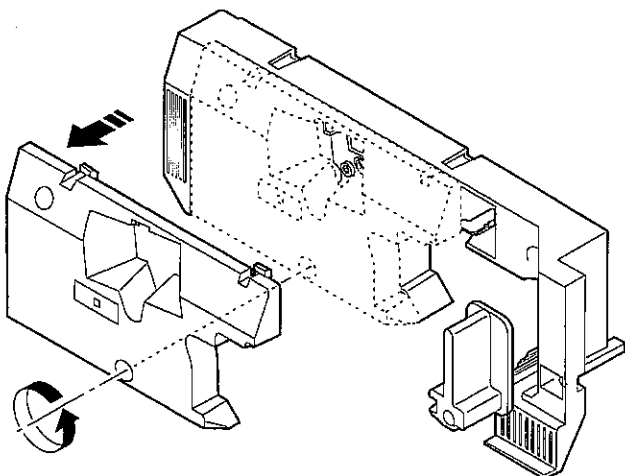
① Remove the main charger unit. (1 screw)



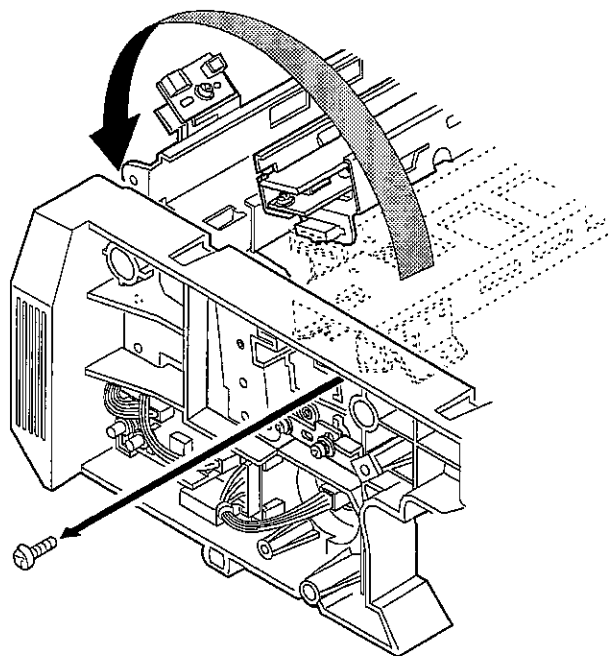
② Remove the blank lamp (BL) unit. (7 pin connector)



③ Remove the process unit front cover. (1 screw)

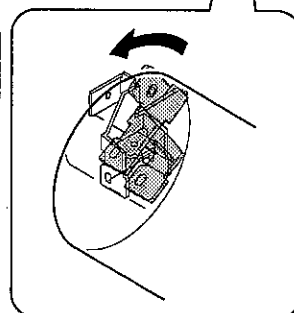
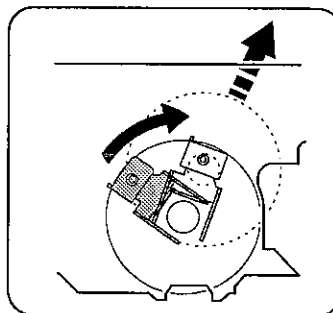
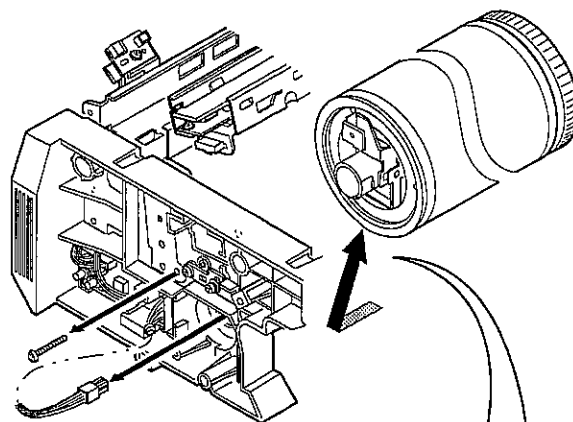


④ Remove the fixing screw (1 pc.) of the main charger guide, and rotate the guide to allow removal of the photoconductor drum.



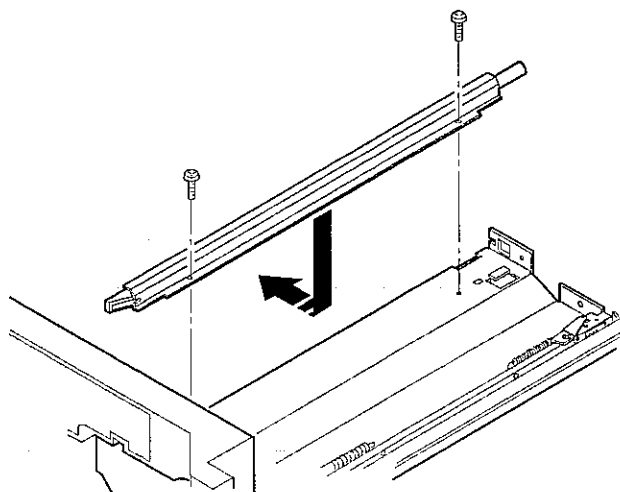
⑤ Remove the drum flange fixing screw (1 pc.). (4 pin connector)

⑥ Rotate the photoconductor drum and remove it from the process unit.



### (3) Pre-transfer discharge charger (PTC) removal

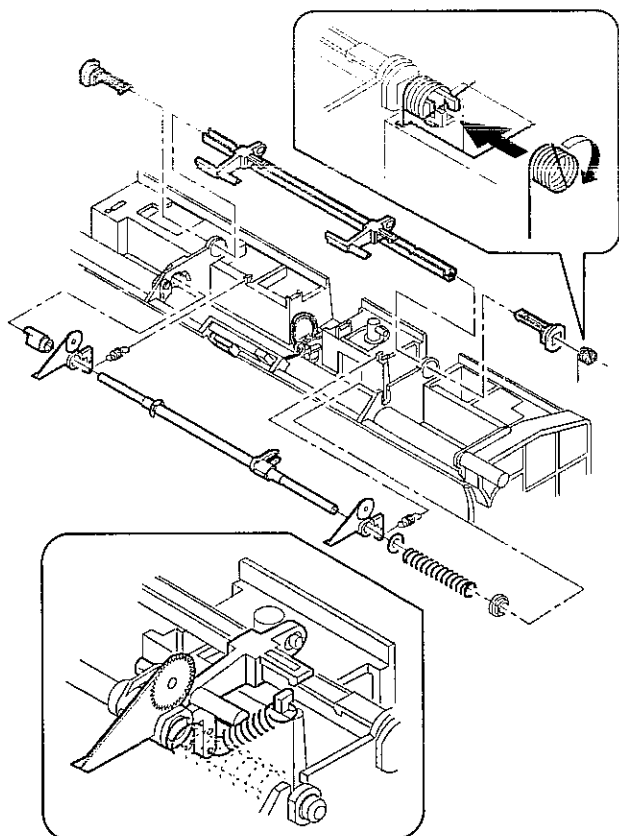
- ① Remove the developer unit.
- ② Rotate the transport open/close lever clockwise to release pressure contact with the process unit.
- ③ Loosen the process unit fixing screws (2 pcs.) and pull out the process unit.
- ④ Remove the blank lamp (BL) unit. (7 pin connector)
- ⑤ Remove the pre-transfer discharge charger (PTC) unit. (2 screws)



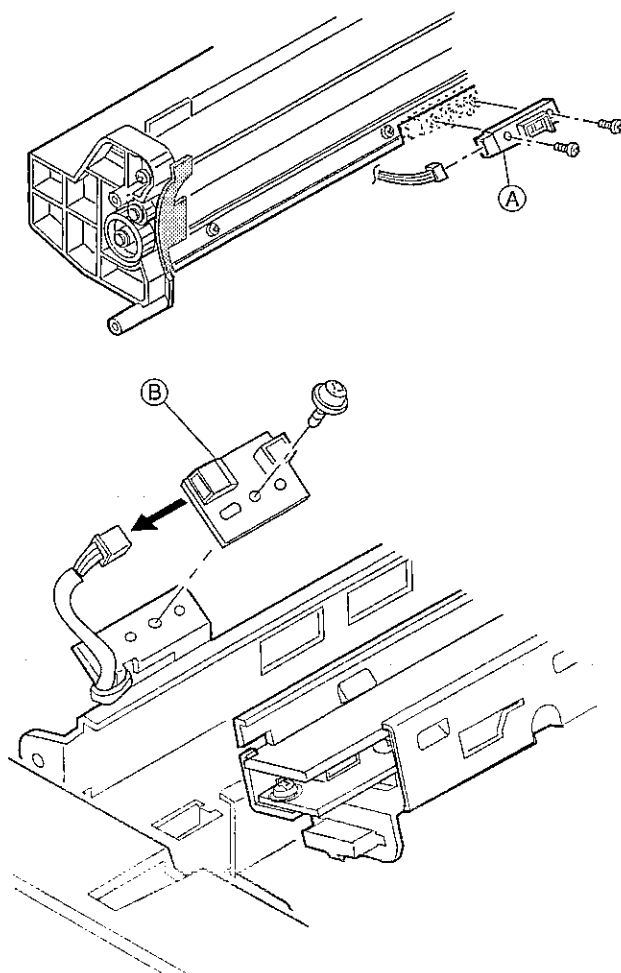
※ When attaching the PTC unit, press it to the photoconductor side and fix with fixing screws.

### (4) Note on cleaner unit

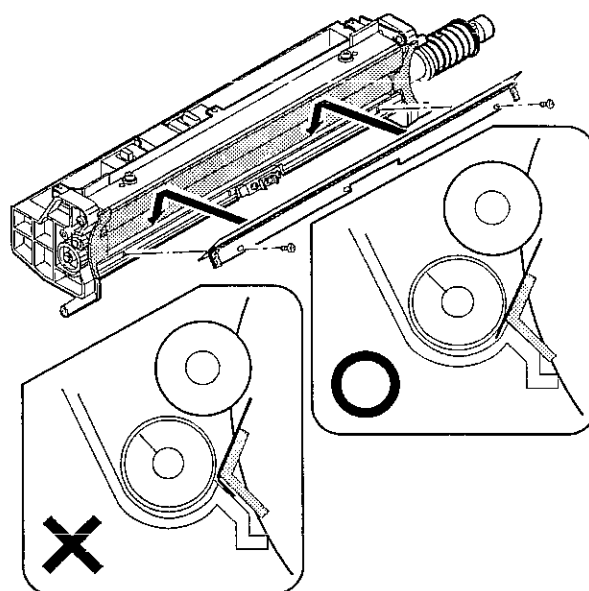
- ① Process separation pawl  
Check the operation of the separation pawl oscillation mechanism.



- ② Clean the surface of the process control sensor ① and the drum marking sensor ② with an air brush or soft cloth.



- ③ Cleaner unit toner reception seal attachment  
Insert the seal lower section into the main body base from the arrow direction and fix it with screws (2 pcs.).



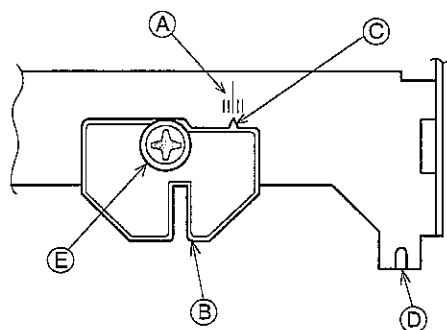
## ④ Cleaning blade

The cleaning blade is fixed with two blue screws.

(Note) When removing or attaching the blade, be sure to release the blade pressure.

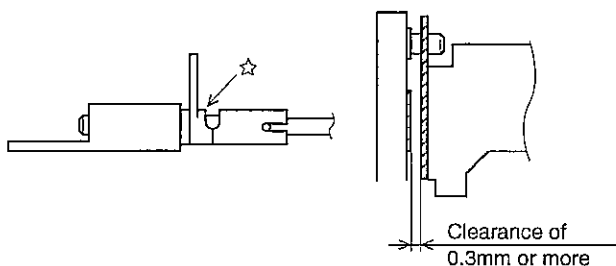
## ⑤ Blade oscillating mechanism adjustment

- A. Fit the projection **(A)** of the CL oscillating plate **(B)** with the center of the scale **(C)** on the blade mounting plate **(D)**, and fix the CL oscillating plate **(B)** with the red screw **(E)**.

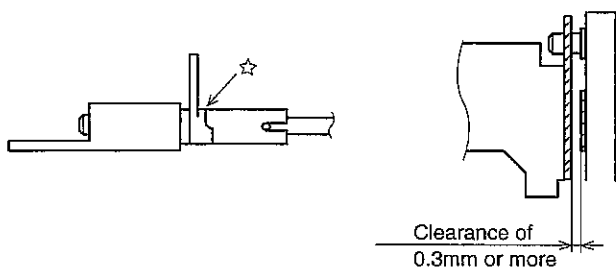


- B. After completion of the oscillating mechanism assembly, check the following items **(a)** and **(b)**. If either **(a)** or **(b)** is not satisfied, adjust the blade oscillating plate fixing position so that both **(a)** and **(b)** are satisfied.

- (a)** Move the CL oscillating arm manually to shift the blade mounting plate to the nearest position to the rear frame. Then check that the clearance between the blade mounting plate in the rear side and the cleaner support plate is 0.3mm or more.  
(The thickness gauge of 0.3mm can be inserted smoothly.)

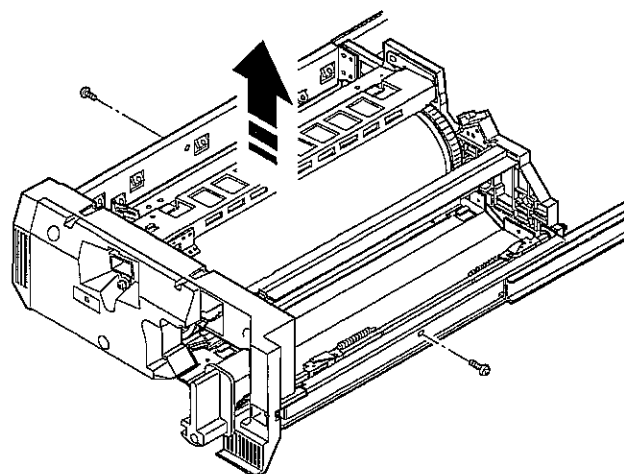


- (b)** Move the CL oscillating arm manually to shift the blade mounting plate to the nearest position to the front frame. Then check that the clearance between the blade mounting plate in the front frame side and the cleaner support plate is 0.3mm or more.  
(The thickness gauge of 0.3mm can be inserted smoothly.)



## (5) Process unit removal

- ① Remove the process unit fixing screws (1 pc. in the right and 1 pc. in the left side).
- ② Hold the process unit front and rear frame, and remove the process unit from the rail upwards.

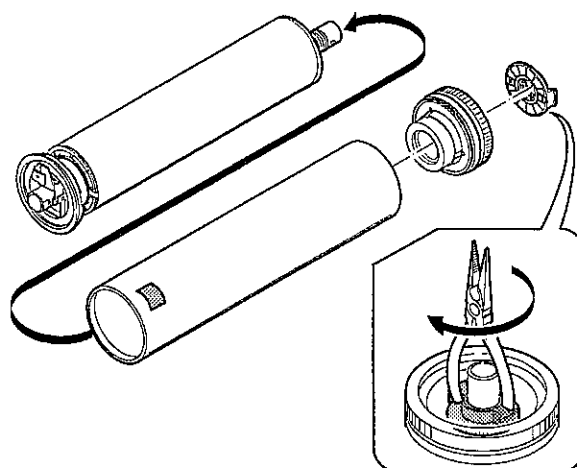


## (6) Photoconductor drum handling

- ① Photoconductor drum removal

Loosen the drum flange fixing nut with pliers. When attaching the photoconductor drum, place the drum marker section in the front frame side.

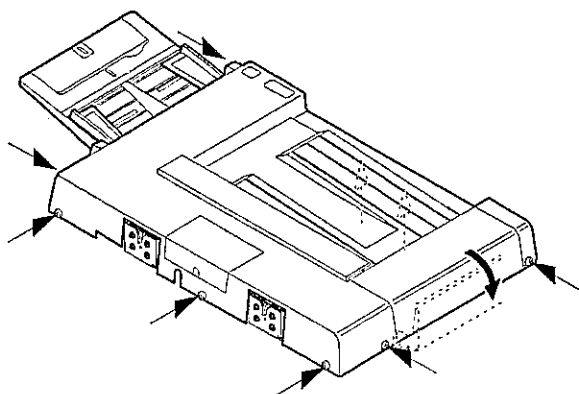
(Note) Since the drum flange diameter in the front side is different from that in the rear side, it cannot be installed reversely.



## 16. RADF (Reverse Automatic Document Feeder) unit

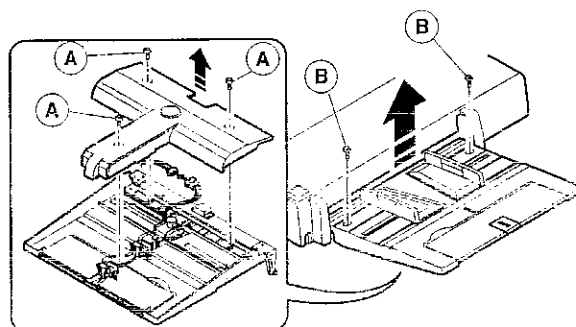
### (1) External cover disassembly

- ① Remove the seven screws and remove the external cover.



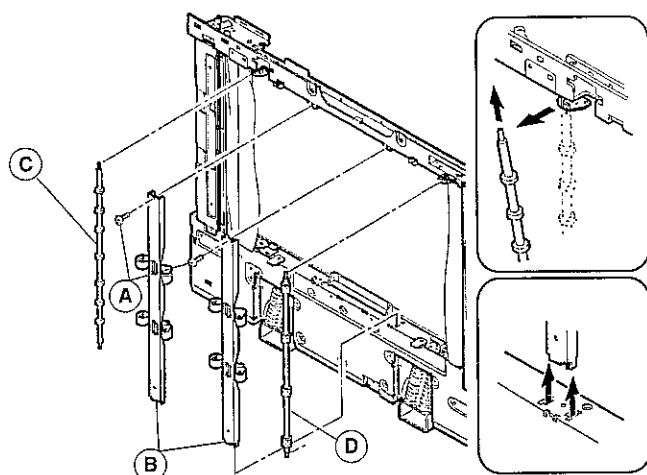
### (2) Original tray disassembly

- ① Remove three screws (A) and remove the tray lower cover.
- ② Disconnect the connector on the rear side of the tray.
- ③ Remove two screws (B) and remove the document tray.



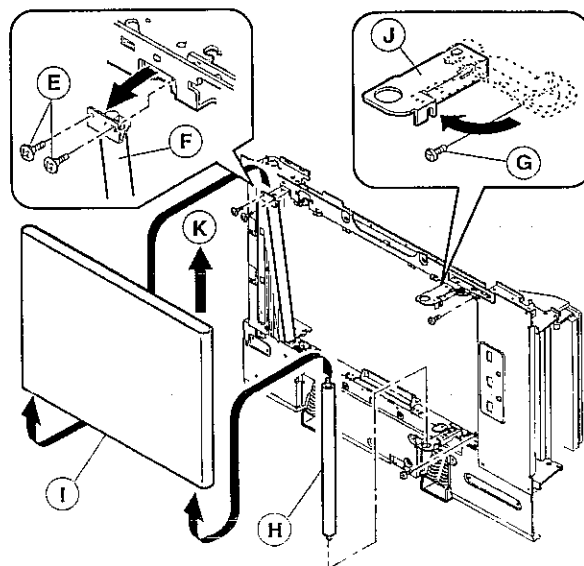
### (3) Original transport belt disassembly

- ① Remove the external cover of the RADF as shown below:  
(Note) When replacing the document transport belt with the RADF installed to the copier, be careful to the following items.
  - Be careful not to scratch the document table (glass table) of the copier body.
  - Disconnect the power plug of the copier.
- ② Remove two screws (A) and remove two tension roller ass'y (B).
- ③ Remove original pressing roller (L) (C) and original pressing roller (R) (D) from the holder.



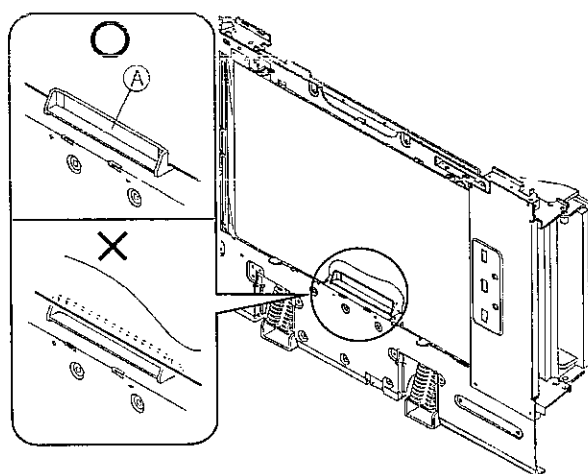
- ④ Remove two screws (E) in the drive roller side (at the left upper side of the figure above), and put down document belt drive roller ass'y (F) towards you.
- ⑤ Remove screw (G) in the follower roller side (at the right upper side and the right lower side in the figure above), and pull the document belt, follower roller ass'y (H) and document transport belt (I) towards you, and pull out document belt follower roller ass'y (H) from bearing holder (J).
- ⑥ Pull out and remove document transport belt (I) from the document belt drive roller in the arrow direction (K).

※ Be careful not to scratch document transport belt (I) with the plate edge.



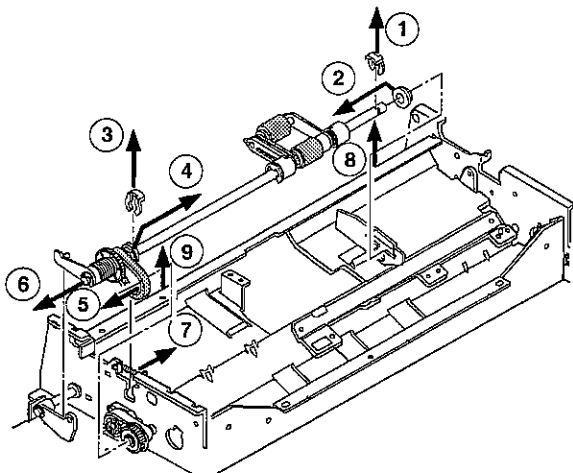
#### (Note for reassembly)

- Reverse the assembly procedures for reassembly.
- Avoid one-sided installation of the document transport belt.
- After installing the document transport belt, check that the belt guide is inside the document transport belt.

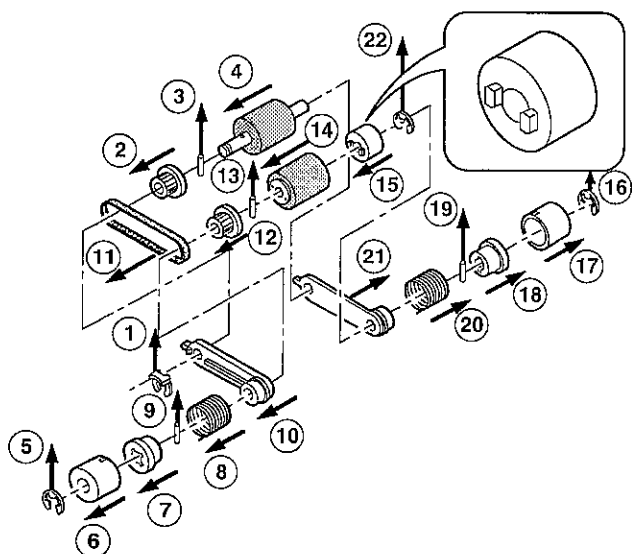


**(4) Paper feed roller and takeup roller disassembly**

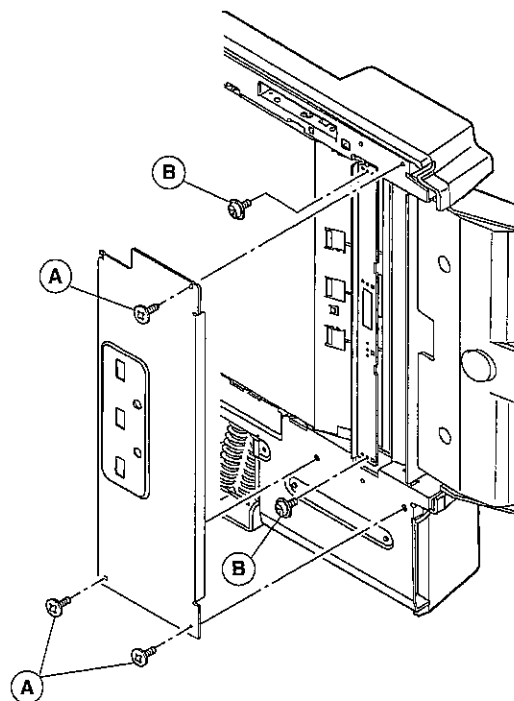
- ① Remove the external cover.
- ② Remove the bearing holder, and slide the bearing in the axis direction. (Procedures of arrows ①~④)
- ③ Remove the timing belt, pull out the paper feed roller in the direction of arrow ⑥, and remove the paper feed roller shaft ass'y from the RADF paper feed section. (Procedures of arrows ⑤ ~ ⑨)



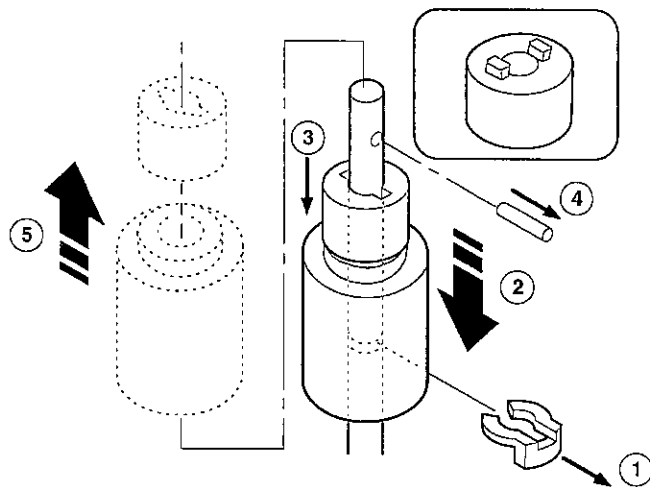
- ④ Remove parts in procedures of arrows ①~②, and disassemble and replace.
- ⑤ For reassembly, reverse the disassembly procedure. (When assembling the one-way clutch ⑮, be careful to its direction.)

**(5) Separation roller disassembly**

- ① Remove the paper feed section cover. (3 screws ④)
- ② Remove the separation roller shaft holder. (2 screws ⑤)

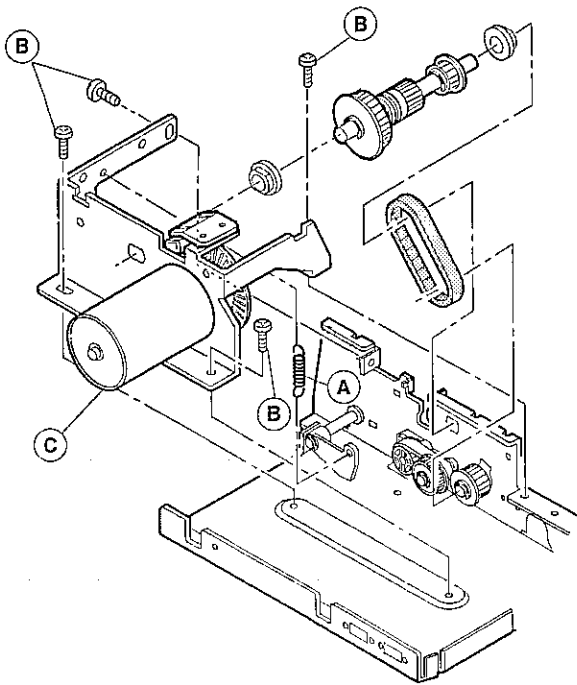


- ③ Remove the bearing holder, slide the separation roller ass'y, and pull out the parallel pin. (Procedures of arrows ①~⑤)



### (6) Paper feed motor unit disassembly

- ① Remove the external cover.
- ② Remove stopper spring (A).
- ③ Remove four screws (B) and remove motor unit (C).

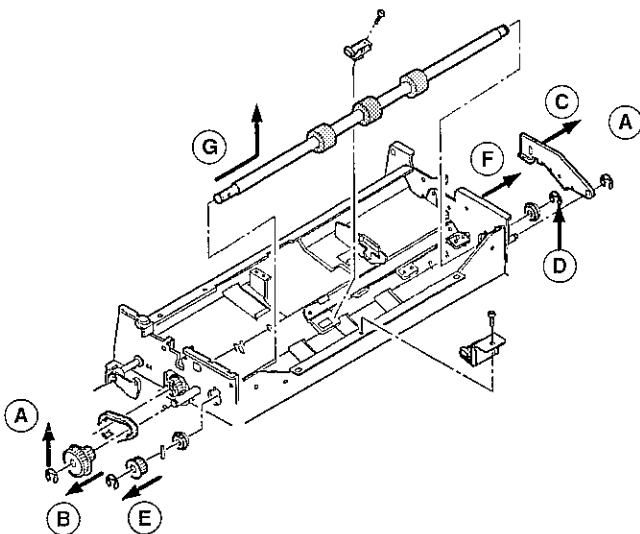


### (7) Resist roller disassembly

- ① Remove the external cover.
- ② Remove the paper feed motor unit. (Refer to procedure (6).)
- ③ Remove the two E-rings (A), the remove idle pulley (B), and the jam release level (C).
- ④ Remove two E-rings (D), gear (E), the parallel pin, and two bearings (F).
- ⑤ Remove the two screws and the two sensors.
- ⑥ Remove the resist roller upwards (arrow G) by sliding it back and forth.

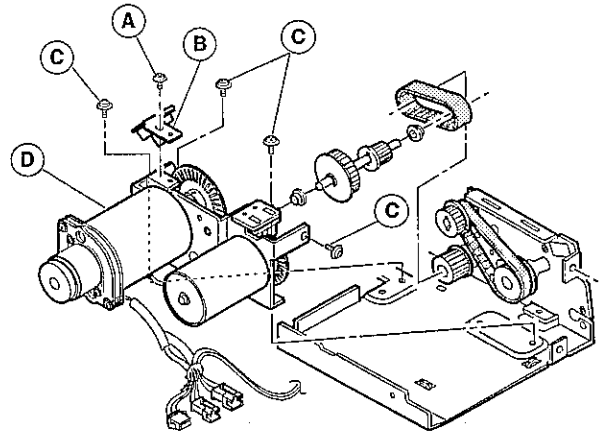
#### (Note for reassembly)

After completion of reassembly, adjust the sensor. (Refer to the corresponding section.)



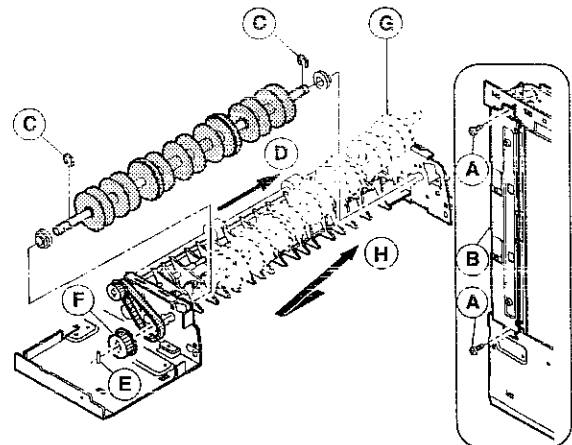
### (8) Reverse motor unit disassembly

- ① Remove the external cover.
- ② Remove screw (A) and remove sensor bracket.
- ③ Remove the four screws (C) and remove the reverse motor unit (D).



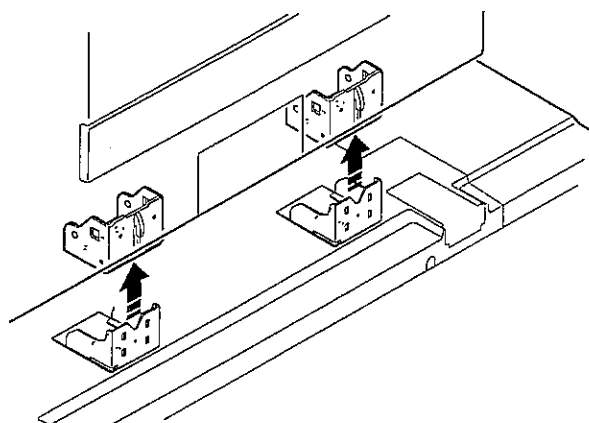
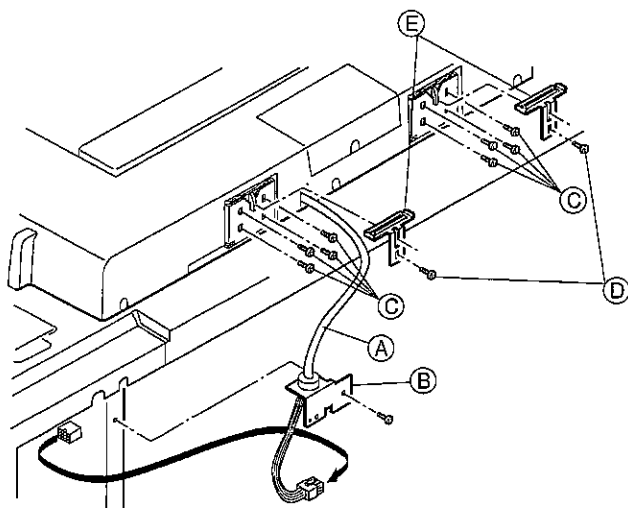
### (9) Reverse roller disassembly

- ① Remove the external cover.
- ② Remove the reverse motor unit. (Refer to procedure (8).)
- ③ Remove two screws (A), and remove lower guide unit (B).
- ④ Remove two E-rings (C), slide the roller in direction (D), and remove parallel pin (E) and pulley (F).
- ⑤ Slide the bearing, and remove the roller (arrow H) by sliding it back and forth.



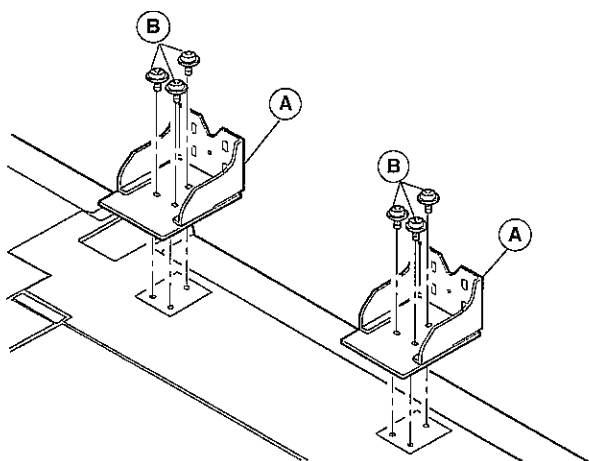
## (10) RADF unit

- ① Remove the rear cover of the copier body.
- ② Remove fixing plate (B) and the connector of harness (A) which extends to the rear side of the copier body.
- ③ Remove eight screws (C), two screws (D), and two adjustment brackets (E).
- ④ Lift the RADF unit upwards and remove it from the body.



## (11) RADF unit installation

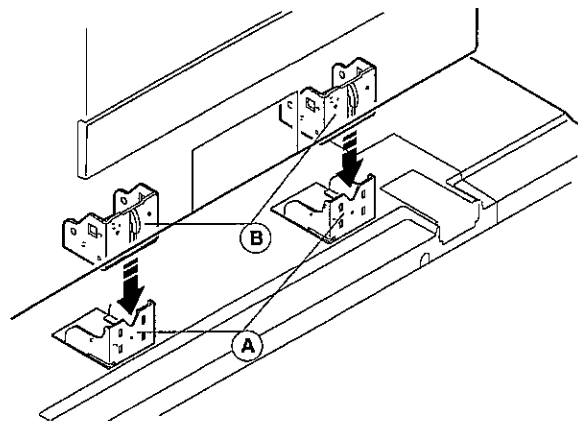
- ① Attach the hinge angle to the copier body.



As shown in the figure, put hinge angle (A) of the RADF onto the copier body, and fix it with the six binding screws (M4 x 10) (B).

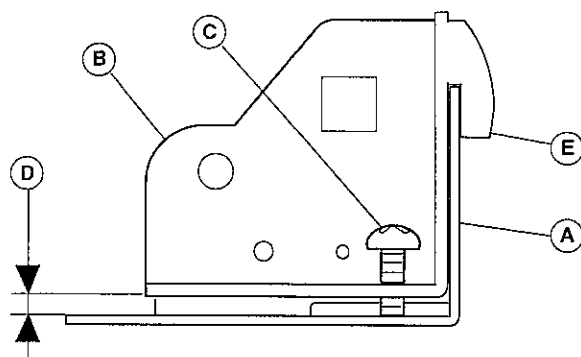
- ② Attach the RADF to the hinge angle.

Insert hinge section (B) of the RADF into the hinge angle (A) attached in procedure (1), and fix it so that the back of the hinge (B) is in contact with the back of hinge angle (A) as shown in the figure below.



After setting, put down the RADF forward slowly to check that hangers (E) are engaged with hinge angle (A). If not, repeat the procedure from the beginning.

※ In this case, check that extension dimension (D) of height adjustment screw (C) is 6mm.

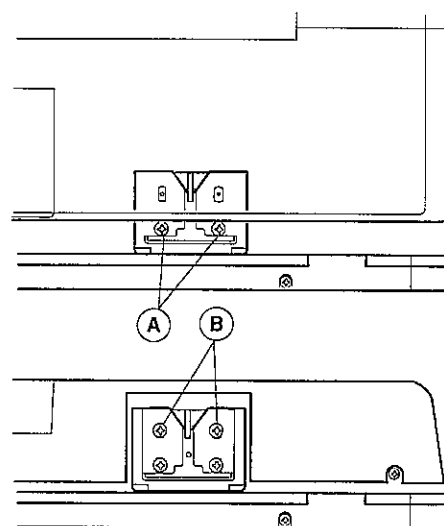


※ If the RADF is put down forward too much, hangers (E) may be deformed.

- ③ Fix the RADF to the hinge angle.

With the RADF attached to the hinge angle (with the RADF put straight), tighten the screws (M4 x 8, bind) in section (A) of the figure below. (4 positions at right and left sides)

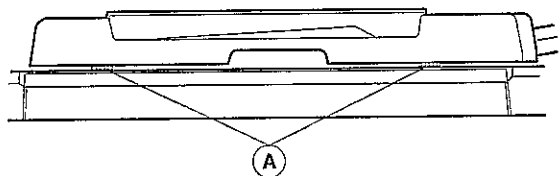
Then slowly close the RADF until the screws can be attached in section (B), and secure section (B) with screws. (M4 x 8, bind)



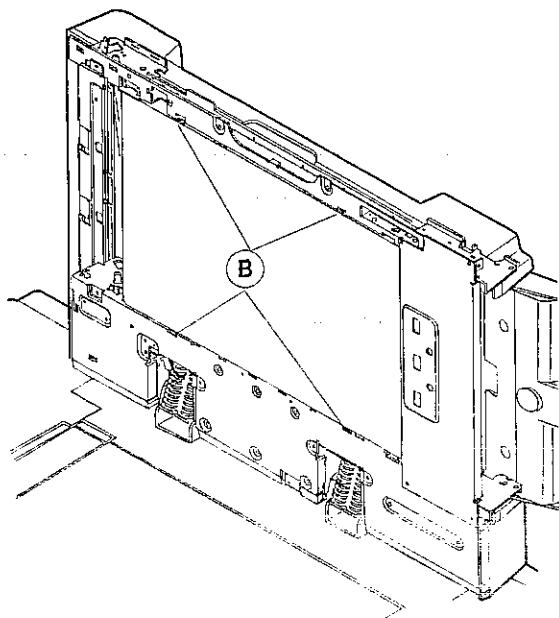
(Note) If the RADF is completely closed before fixing section (B), it may be difficult to tighten the screws.

## ④ RADF height check

Close the RADF until it touches with magnet catch ④, and check the RADF height.

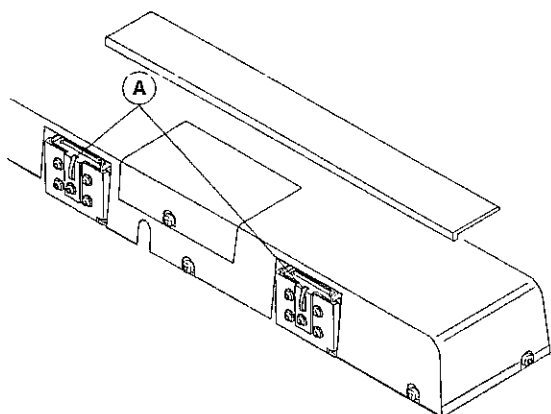


If the magnet catch doesn't attract and there is no other abnormality, perform procedures 4-(2) and later, and check again. The clearance between the RADF spacer ⑤ and the glass must be max. 0.5mm.

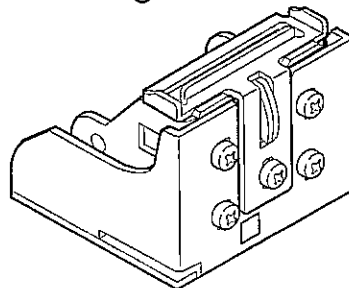
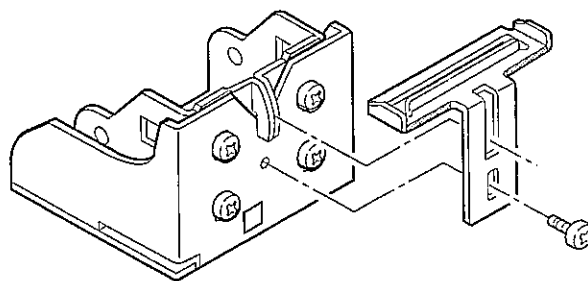


## ⑤ Fix the adjustment bracket to adjust RADF open/close angle. (Same package)

Insert the adjustment bracket ④ into the RADF, and fix with screws (M4 x 8, bind). (The screws are packed in the same package.)



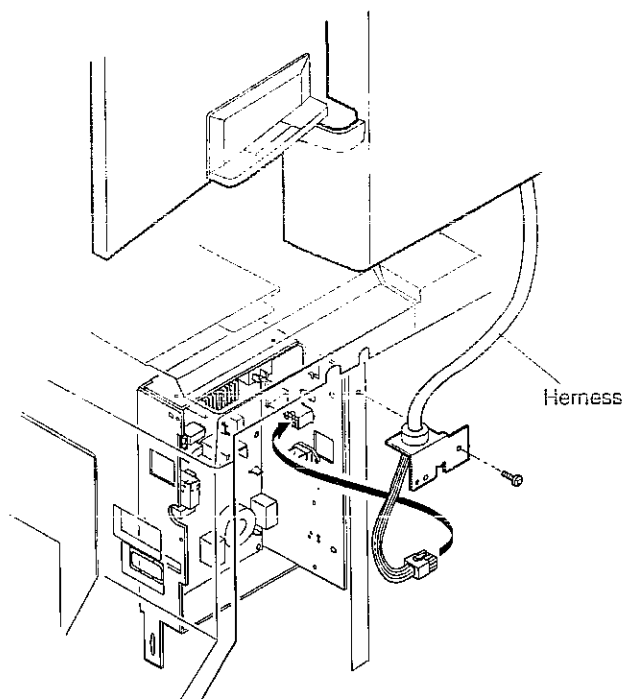
※ The RADF open/close angle is adjusted by inserting adjustment bracket ④. ( $60^\circ \pm 5^\circ$ )



※ Do not disassemble the adjustment bracket except for maintenance.

## ⑥ Process the harness.

Connect the connector of the harness which extends from the rear of the RADF with the copier body, and fix the harness fixing plate to the support pole.



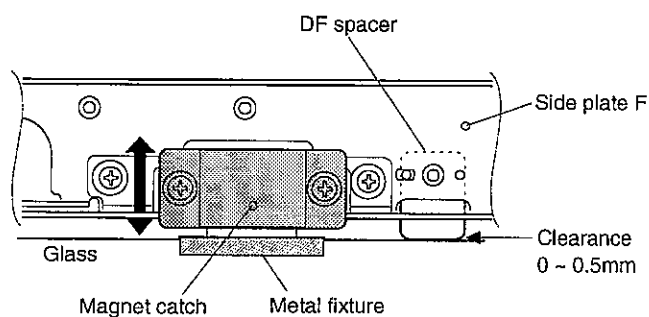
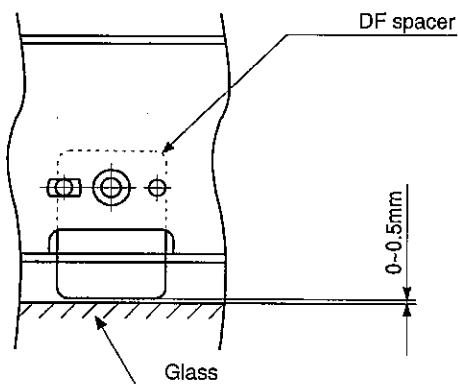
※ Remove the rear cover of the copier for the procedure.

## ⑦ Others

## A. Magnet catch

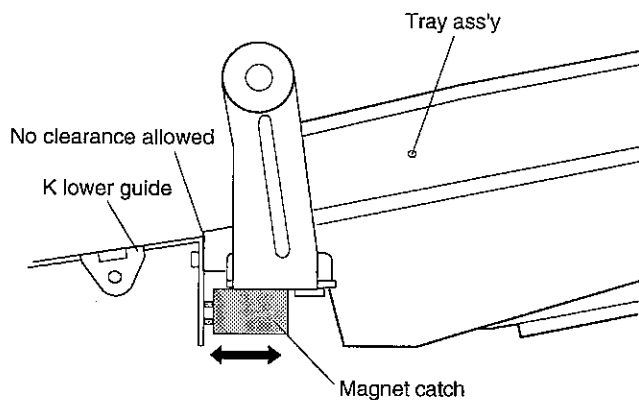
## Side plate f section

Adjust the magnet catch so that clearance between the glass and side plate F DF spacer is 0~0.5mm, when the magnet catch is sucking.

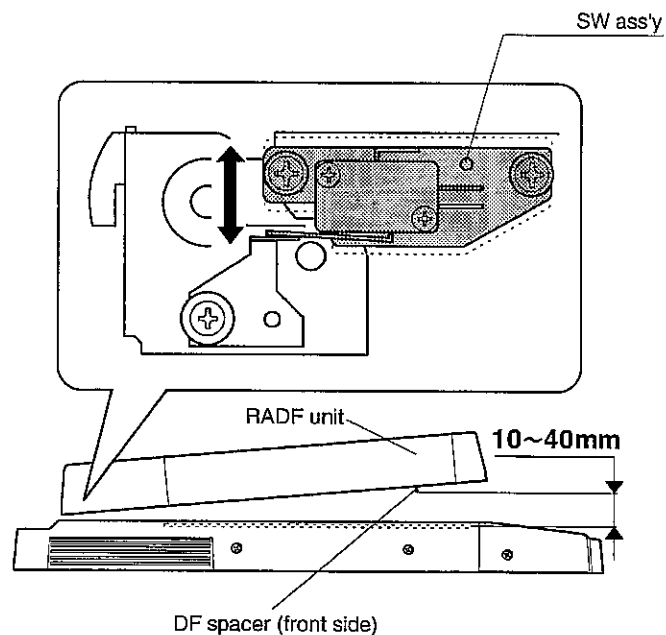


## Tray plate section

Adjust the magnet catch so that there is no clearance between the tray ass'y and K lower guide.



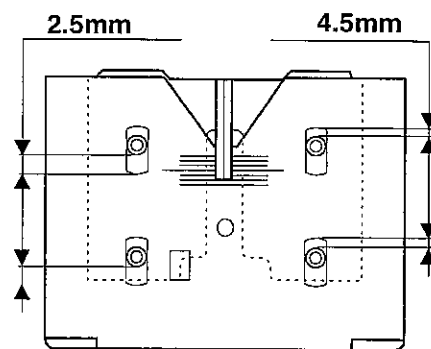
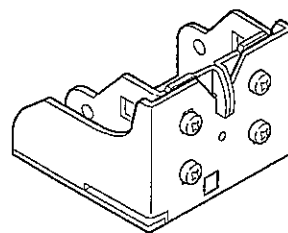
## B. Microswitch attachment to the hinge section



Adjust the SW ass'y attachment so that the microswitch is turned on with the clearance of 10~40mm between the glass and the DF spacer (front side) when the RADF is closed from its open state.

## C. Height position adjustment screw (contact screw) protrusion

The protrusion is 6mm and the hinge angle and the hinge sections are as shown below.



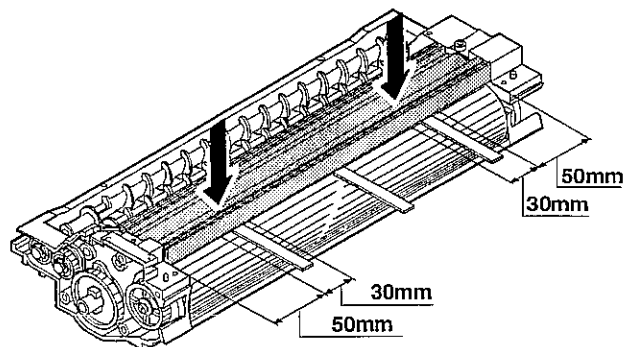
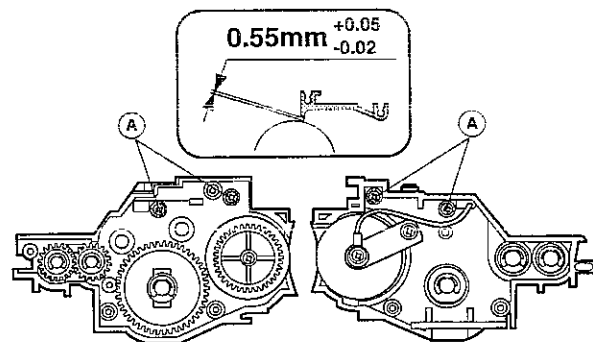
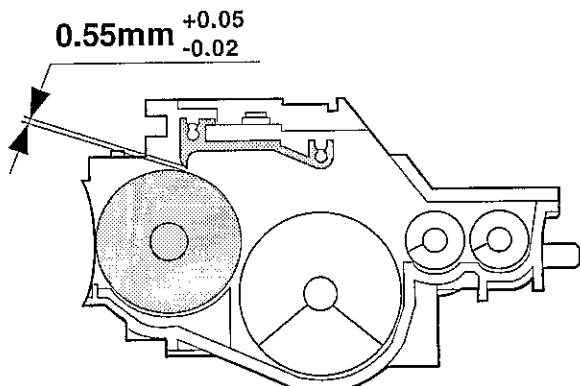
## [6] ADJUSTMENTS

1. Developer section adjustments
  - (1) Developer doctor clearance adjustment
  - (2) Developer magnet roller main pole position adjustment
  - (3) DV bias voltage adjustment
  - (4) Note for installation of developer unit rollers
  - (5) Thrust clearance adjustment
  - (6) Note for attachment of developer side seals F and R
  - (7) Note for attachment of developer/process unit to the main body
2. Optical system adjustments
  - (1) Lens reference position adjustment
  - (2) No. 4/No. 5 mirror reference position adjustment
  - (3) Vertical copy magnification ratio adjustment
  - (4) Image resolution adjustment
  - (5) Horizontal copy magnification ratio adjustment
  - (6) Zoom correction value input (Simulation 48-01A, 48-01C, 48-01E, 48-01F)
  - (7) Vertical skew adjustment
3. Process section adjustments
  - (1) Blank lamp (BL) position adjustment
  - (2) High voltage output, balance adjustment
  - (3) Note for the high voltage charger unit maintenance
  - (4) High altitude countermeasures
4. Operation panel adjustment
  - (1) LCD display contrast adjustment
5. Paper feed section adjustment
  - (1) Suction/blow air pressure measurement
  - (2) Center shift adjustment (Tray 1, 2, 3)
  - (3) Tray height adjustment (Tray 2, 3 only)
  - (4) Tray parallelism adjustment (Tray 2, 3 only)
6. Switchback (reverse) unit
  - (1) Duplex copy reverse gate solenoid (DGS1, DGS2) position adjustment
7. Waste toner unit section
  - (1) Waste toner bottle weight sensor mounting position adjustment
8. Copy picture quality adjustment
  - (1) The picture quality adjustment must be performed in the following cases.
  - (2) Conditions required for the picture quality adjustment
  - (3) Process control
  - (4) Exposure adjustment procedure
  - (5) Exposure adjustment procedure
9. RADF UNIT SECTION (ELECTRICAL SECTION)
  - (1) Individual unit test mode selection
  - (2) Sensor level adjustment
  - (3) Paper exit motor rotation speed adjustment
  - (4) RADF height adjustment

### 1. Developer section adjustments

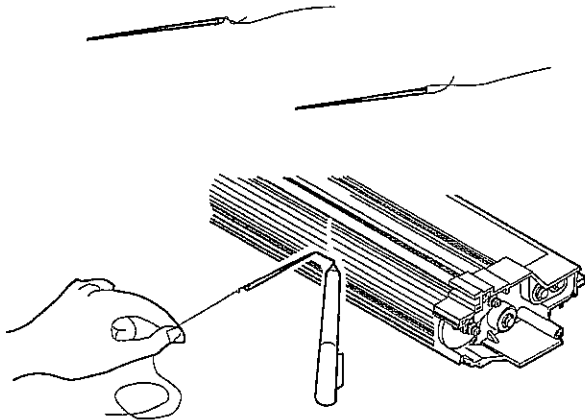
#### (1) Developer doctor clearance adjustment

- ① Remove the four fixing screws securing the toner joint cover, and remove the joint cover.
  - ② Remove the four fixing screws securing the DV cover, and remove the DV cover.
  - ③ Remove the three fixing screws securing the DV drive plate. Remove the two fixing screws securing the connector and remove the DV drive plate.
  - ④ Loosen the DV doctor fixing screws **A**. (2 pcs. on the rear frame, and 2 on the front frame)
  - ⑤ Insert a thickness gauge of 0.55mm into the doctor gap, 50mm to 80mm from each end of the doctor blade.
  - ⑥ Push down on the doctor blade in the arrow direction and tighten the DV doctor fixing screw. (Perform this at both the front and the rear frames.)
  - ⑦ Check that there is a clearance of  $0.55\text{mm}^{+0.05}_{-0.02}\text{mm}$  at each position 50mm to 80mm from each end of the DV doctor.
- ※ Note: When inserting the thickness gauge, be careful not to scratch the DV doctor and the MG roller.



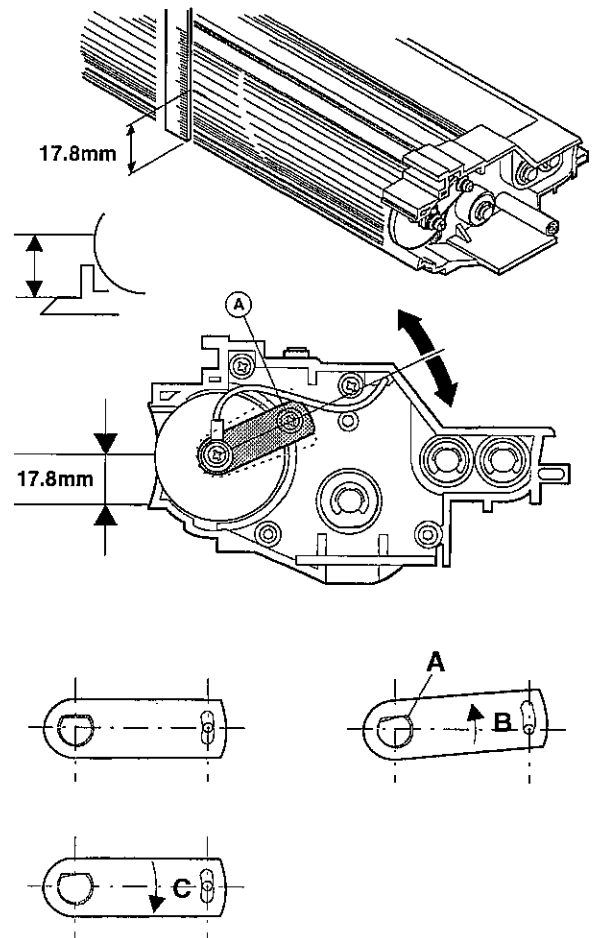
## (2) Developer magnet roller main pole position adjustment

- ① Remove the four fixing screws securing the toner joint cover, and remove the joint cover.
- ② Remove the four fixing screws securing the DV cover, and remove the DV cover.
- ③ Tie a thread on a needle as shown in the figure.
- ④ Hold the thread and move the needle close to the MG roller. (Do not use a clip instead of a needle, because the proper position cannot be detected with a clip due to the small diameter of the MG roller.)
- ⑤ Mark the position where the needle makes contact with the MG roller surface.
- ⑥ Measure the distance from the marked position to the developer guide surface and check that the distance is  $17.8\text{mm} \pm 0.2\text{mm}$ . If the distance is not in the above range, loosen the main pole adjustment plate fixing screw (A), and fix the MG roller adjustment plate to the MG roller with the reverse threaded screw.



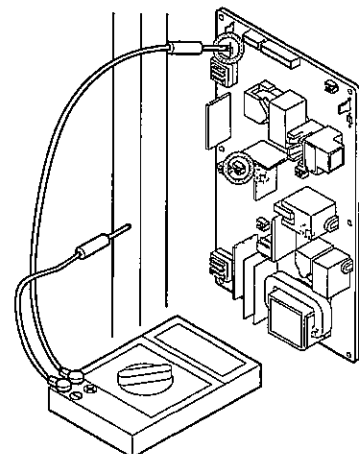
When fixing with the left-hand screw, turn the MG roller shaft counterclockwise. In this case, if there is any unnecessary clearance, make contact at point A on the MG roller adjustment plate and turn the MG roller adjustment plate in the direction of arrow B.

- ⑦ Make contact at point A and turn the MG roller adjustment plate in the direction of arrow C.
- ⑧ When driving, the MG roller shaft is under counter-clockwise rotational torque, therefore the main pole is normally adjusted in state ⑥.
- ⑨ Perform this adjustment only counterclockwise. For readjustment, tighten the left-hand screw, make contact at point A and perform procedure ⑦.



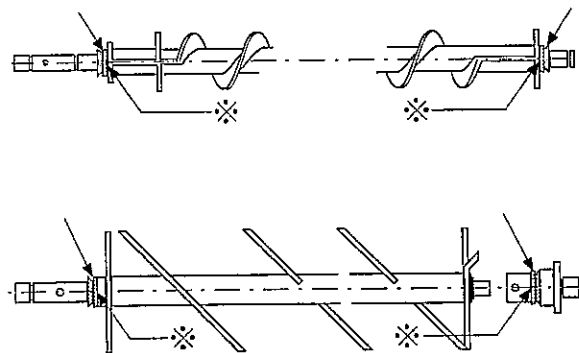
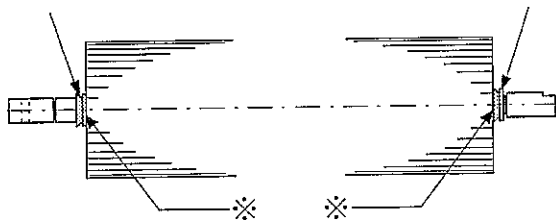
## (3) DV bias voltage adjustment

- ① Set the digital multi-meter range to DC300V or higher.
- ② Apply the test probe between the high voltage unit DV bias output check pin (BSCP) and the chassis (GND).
- ③ Perform simulation 8-1. (The DV bias voltage is supplied for 30 sec.)
- ④ Adjust the set number of simulation 8-1 so that the output voltage is  $-200 \pm 5\text{V}$ .  
Adjustment range: 3~56 ( $-51\text{V} \sim -350\text{V}$ )

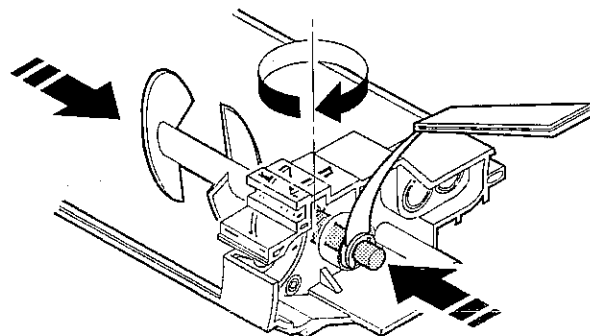


**(4) Note for installation of developer unit rollers**

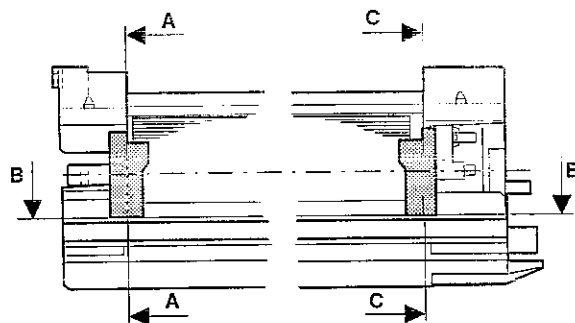
- ① V-ring installing direction.
- ② Allow no clearance between the V-ring and the roller and the mark section.
- ③ Face the engraved side of the DSD collars (F and R) outward.

**(5) Thrust clearance adjustment**

- ① When assembling the MX roller and the BK adjustment shaft, insert a thickness gauge ( $t=0.2\text{mm}$ ) into the clearance between the E-ring (which is attached to the BK adjustment shaft) and the DV shaft bearing side, then tighten the set screw while pressing both ends of the shaft.

**(6) Note for attachment of developer side seals F and R**

- ① Clean the attachment surface. (Remove oil and foreign material from the surface.)
- ② Attach the seal neatly. (Do not peel off and reapply repeatedly).
- ③ When attaching the DV cover, be careful not to deform the seals.
- ④ Attach side seals along the reference lines A~C.

**(7) Note for attachment of developer/process unit to the main body**

When attaching the process unit to the main body, remove the developer unit beforehand. If the process unit is inserted with the developer unit installed, the drawer connector pin of the developer unit may be damaged, resulting in poor or defective contact.

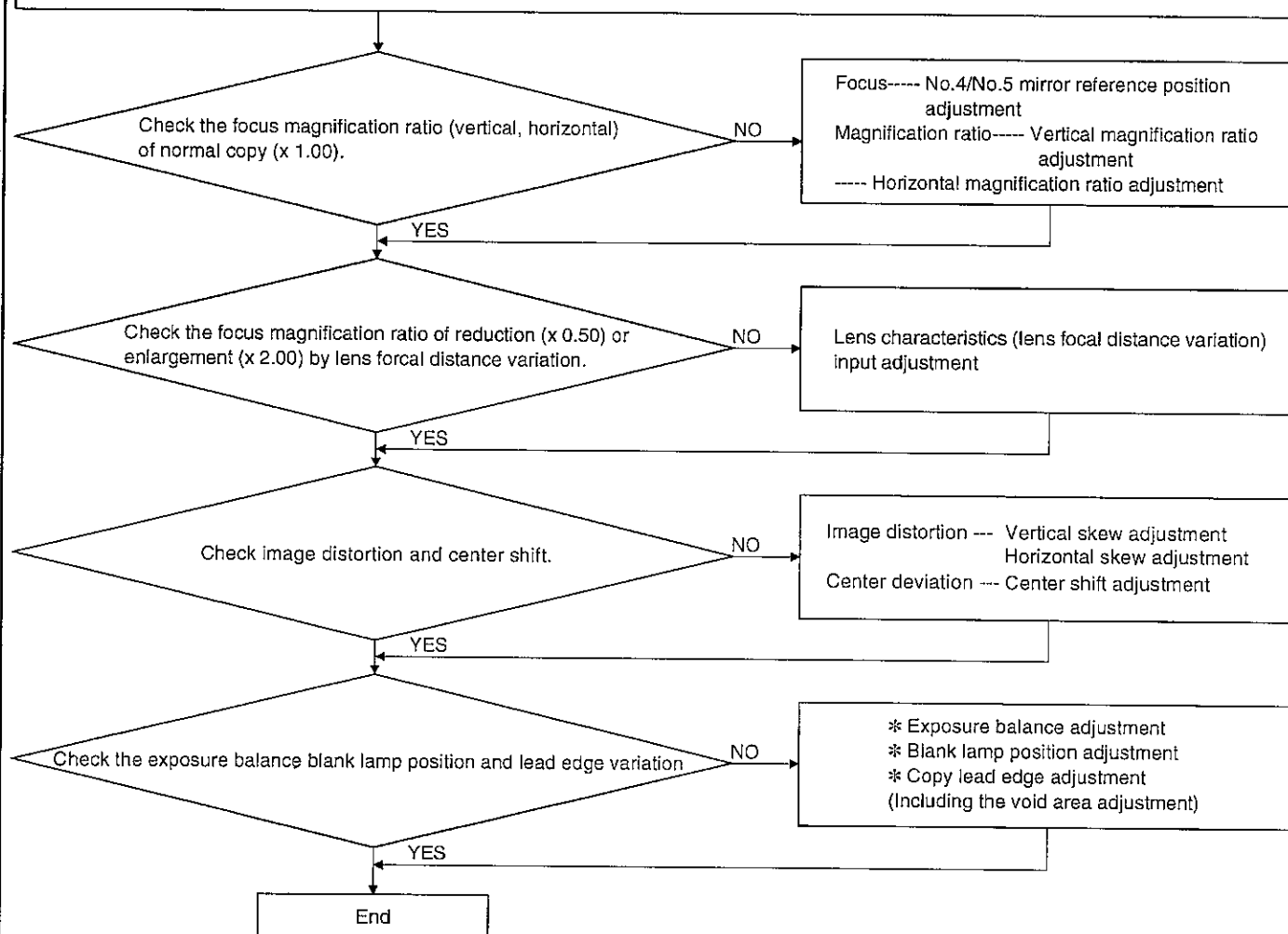
## 2. Optical system adjustments

Perform the optical system adjustments according to the following flowchart.

Check the preset value shown below according to the lens focal distance rank (lens number).

- Lens reference position adjustment ..... Simulation 48-01 (B)
- No. 4/No.5 mirror reference position image resolution adjustment .... Simulation 48-01 (D)
- Vertical direction copy magnification ratio ..... Simulation 48-01 (B)
- Horizontal direction copy magnification ratio ..... Simulation 48-02
- Zoom correction value input (Lens focal distance variation) ..... Simulation 48-01 (A), 48-01 (C), 48-01 (E), 48-01 (F)

For selection after entering a simulation sub code, press .



※ The exposure balance adjustment, the blank lamp adjustment, and the copy lead edge adjustment can be performed individually. The other adjustments must be performed in the sequence of the flowchart.

## (1) Lens reference position adjustment

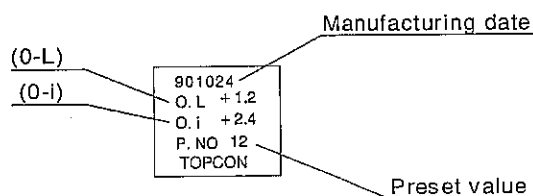
The reference value corresponding to each lens characteristics must be entered. (This value determines the lens home position.)

This adjustment must be performed in the following cases.

- When the lens is replaced.
- When the mirror base is replaced or its mounting position is changed.
- When the main PWB (including the EEPROM) is replaced.
- When self diagnostic U2 occurs.

(Procedure) Perform simulation 48-01 (B).

Input  $\boxed{C} \rightarrow \boxed{=J} \rightarrow \boxed{0} \rightarrow \boxed{=J} \rightarrow \boxed{4} \rightarrow \boxed{8} \rightarrow \boxed{PSW} \rightarrow \boxed{1} \rightarrow \boxed{PSW}$  keys, select B with  $\boxed{\rightarrow}$  key, and the preset value or "50" will be displayed in the copy quantity display.



Substitute value [O - L] (Original - Lens distance variation  $\Rightarrow -3.9 \sim +3.9$ ) of the label attached to position A in the figure into the following formula to obtain the result.

$$50 - [(O - L) \times 5] = \text{Corrected reference value}$$

Example: When the value is +1.2:

$$50 - (+1.2 \times 5) = 44 \leftarrow \text{Input value}$$

Press the PROGRAM key (or START) to store the set value into memory.

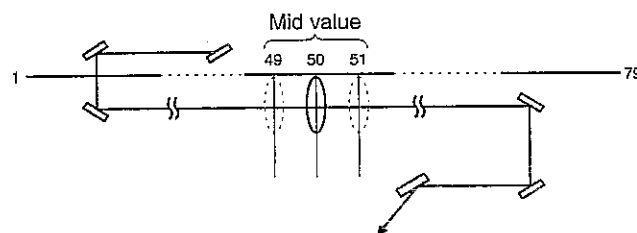
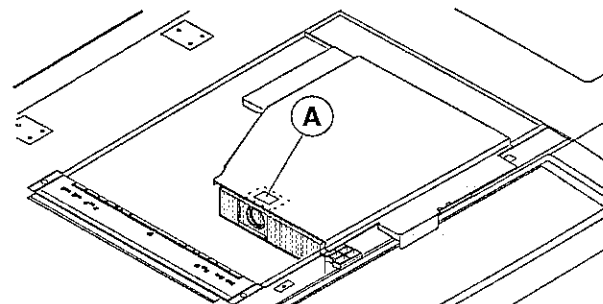
(Display contents)

SIMULATION No.48

INPUT 1-5

1. Front/rear direction magnification ratio adjustment
2. Paper transport direction magnification ratio adjustment (mirror speed correction)
3. Lens characteristics input
4. No.4/No.5 mirror characteristics input
5. Mirror speed correction value input

4 8 B \* \* \*



## (2) No. 4/No. 5 mirror reference position adjustment

1. Lens reference position adjustment  $\rightarrow$  The value corresponding to the lens characteristics must be entered. (This value determines the No. 4/No. 5 lens home position.)

This adjustment must be performed in the following cases.

- When the lens is replaced.
- When the mirror base is replaced or its mounting position is changed.
- When the main PWB is replaced.
- When self diagnostic U2 occurs.

(Procedure) Perform simulation 48-01 (D).

Input  $\boxed{C} \rightarrow \boxed{=J} \rightarrow \boxed{0} \rightarrow \boxed{=J} \rightarrow \boxed{4} \rightarrow \boxed{8} \rightarrow \boxed{PSW} \rightarrow \boxed{1} \rightarrow \boxed{PSW}$

keys, select D with  $\boxed{\rightarrow}$  key (focus correction), and the preset value or "60" will be displayed in the copy quantity display.

Substitute value "O - i" located at in position A in the figure into the following formula to obtain the result.  $60 - [(O - i) \times 5] = \text{Corrected reference value}$

Example: When the value is +1.2:

$$60 - (+1.2 \times 5) = 54$$

If the No. 4/no. 5 mirror reference value is greater than the center value 60, the mirror moves away from the lens to lengthen the light path. If it is smaller than the center value, the mirror moves towards the lens to shorten the light path.

Press the PROGRAM key (or START) to store the set value into memory.

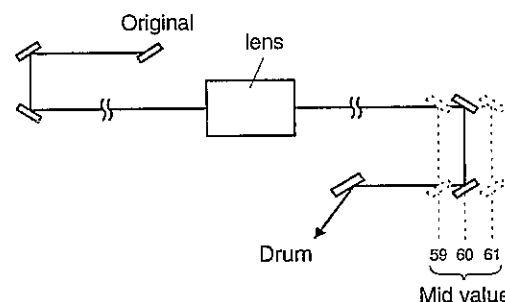
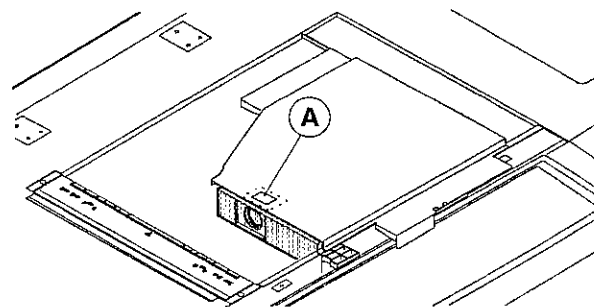
(Display contents)

SIMULATION No.48

INPUT 1-5

1. Front/rear direction magnification ratio adjustment
2. Paper transport direction magnification ratio adjustment (mirror speed correction)
3. Lens characteristics input
4. No.4/No.5 mirror characteristics input
5. Mirror speed correction value input

4 8 D \* \* \*



### (3) Vertical copy magnification ratio adjustment

This adjustment must only be performed when mirror bases A, B and C are in parallel with each other and when focus is properly adjusted.

This adjustment must be performed in the following cases.

- When the lens home position sensor (LHPS) is replaced or its mounting position is changed.
- When the lens is replaced.
- When the mirror base is replaced or its mounting position is changed.
- When the main PWB (including the EEPROM) is replaced.
- When self diagnostic U2 occurs.

(Procedure)

- ① Place a scale on the original table as shown in the figure at right.
- ② Make a normal copy of A4 (11" × 8 1/2").
- ③ Compare the copied scale image on the paper to the actual scale.
- ④ Obtain the vertical magnification ratio correction factor from the following formula.

$$\text{Vertical copy magnification ratio correction factor} = \frac{\text{Original dimension} - \text{Copy image dimension}}{\text{Original dimension}} \times 100 (\%)$$

(Example) Vertical copy magnification ratio correction factor =  $\frac{100 - 99}{100} \times 100 = 1$

- ⑤ Perform simulation 48-01 (B).

With  $\boxed{C} \rightarrow \boxed{=J} \rightarrow \boxed{0/0} \rightarrow \boxed{=J} \rightarrow \boxed{4} \rightarrow \boxed{8} \rightarrow \boxed{PSW} \rightarrow \boxed{1} \rightarrow$

$\boxed{PSW} \rightarrow \boxed{\rightarrow}$  keys, the preset value of the vertical copy magnification ratio adjustment is displayed.

- ⑥ Obtain the preset value of the vertical copy magnification ratio adjustment from the following formula.

Vertical copy magnification ratio preset value = The above preset value (displayed in step ⑤) + Vertical copy magnification ratio correction factor × 10

(Example) The above preset value = 25 + (1 × 10) = 35

- ⑦ Set the vertical copy magnification ratio adjustment preset value.

$\boxed{\phantom{00}} \rightarrow \boxed{\phantom{00}} \rightarrow \boxed{PSW}$

When the preset value is changed by 1, the copy magnification ratio is changed 0.1%.

- ⑧ Make a normal copy and compare the copied scale image on the paper to the actual scale.
- ⑨ If the scale image coincides with the actual scale, the adjustment is completed. If not, repeat steps ② through ⑧ until the above condition is satisfied.
- ⑩ Cancel simulation 48.

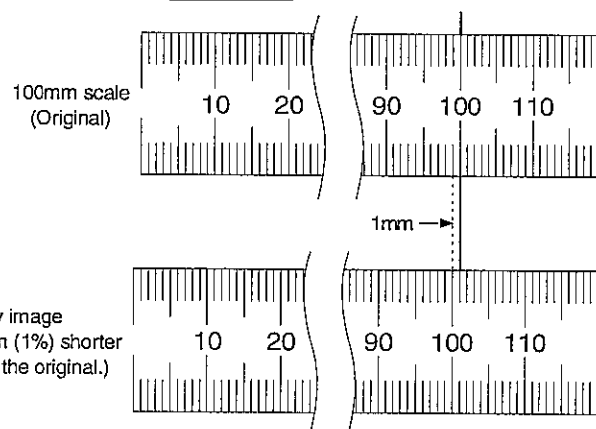
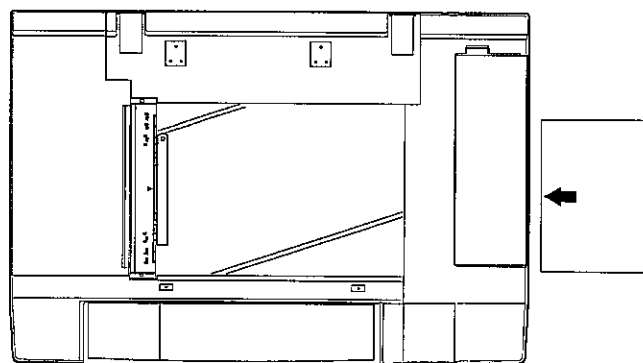
(Display contents)

SIMULATION No.48

4 8 B \* \* \*

INPUT 1-5

1. Front/rear direction magnification ratio adjustment
2. Paper transport direction magnification ratio adjustment (mirror speed correction)
3. Lens characteristics input
4. No.4/No.5 mirror characteristics input
5. Mirror speed correction value input



### (4) Image resolution adjustment

(Procedure) Perform simulation 48-01 (D).

- ① Check the preset value corresponding to the focal distance rank in simulation 48-01.

With  $\boxed{C} \rightarrow \boxed{=J} \rightarrow \boxed{0/0} \rightarrow \boxed{=J} \rightarrow \boxed{4} \rightarrow \boxed{8} \rightarrow \boxed{PSW} \rightarrow \boxed{1} \rightarrow$

$\boxed{PSW} \rightarrow \boxed{\rightarrow}$  keys, select D (focus correction), and the ready lamp will light up and the preset value will be displayed.

- ② If no preset value is set, perform the reference value setting according to "(2) No. 4/No. 5 mirror reference position adjustment." Make a copy with "UKOG-0089CSZZ" or the resolution check chart and check the resolution.

- ③ When changing the set value, enter the new set value using the 10 keypad.

$\boxed{\phantom{00}} \rightarrow \boxed{\phantom{00}} \rightarrow \boxed{PSW}$

Checking procedure

After the No. 4/No. 5 mirror reference position adjustment, check the following.

- ① Set the test chart "UKOG-0089CSZZ" or the resolution check chart on the original table.
- ② Make a normal copy of the test chart using A3 (11" × 17") paper.
- ③ Check the focus at the center and the corners. (See the figure at right.)

- ④ Check that the focus is proper and that the resolution is 5.0 lines/mm or more at the center and 4.5 lines/mm or more at the corners.

If the focus is improper, change the No. 4/no. 5 mirror reference adjustment preset value by one rank and repeat procedures ② through ④ until the proper specifications are obtained.

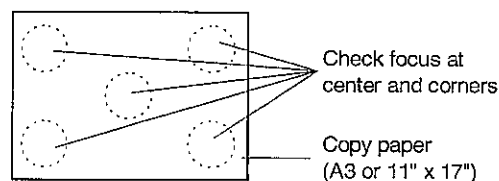
(Display contents)

SIMULATION No.48

4 8 D \* \* \*

INPUT 1-5

1. Front/rear direction magnification ratio adjustment
2. Paper transport direction magnification ratio adjustment (mirror speed correction)
3. Lens characteristics input
4. No.4/No.5 mirror characteristics input
5. Mirror speed correction value input



## (5) Horizontal copy magnification ratio adjustment

This adjustment must be performed in the following cases.

- When the main PWB is replaced.
- When the EEPROM and the battery in the main PWB is replaced.
- When self diagnostic U2 occurs.
- When the mirror base is replaced.

By changing the mirror scan speed scan speed, the horizontal (paper feed direction) copy magnification ratio is adjusted.

(Procedure) Perform simulation 48-02.

- Put a scale on the original table as shown in the figure at right. Perform simulation 48-02, and the machine goes into the warming up mode and the ready lamp lights up. At the same time, the preset value (0 ~ 30) is displayed. In this state, make a normal copy and obtain the copy magnification ratio correction factor.

Copy magnification ratio correction factor (MRCP) =

$$\frac{\text{Original dimension} - \text{Copy dimension}}{\text{Original dimension}} \times 100 [\%]$$

- Change the displayed value using the copy magnification ratio correction factor.

(Input value) = (Preset value) + (Copy magnification ratio correction factor [%]) × 10

• Example 1: 25 = 15 + 1 × 10

• Example 2: 5 = 15 + (-1 × 10)

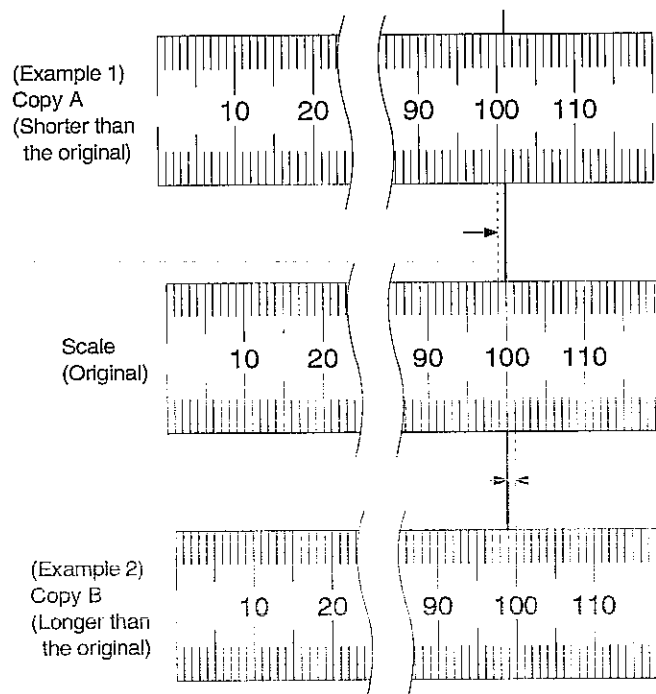
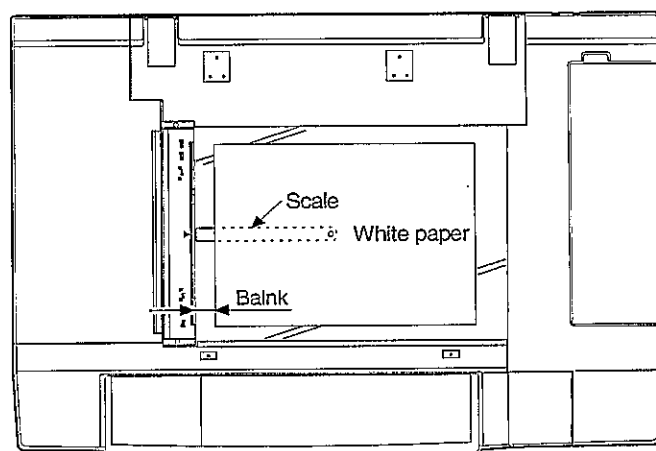
Enter the input value and press the START key. The input value is stored in memory and the ready lamp goes off.

- Cancel simulation 48-02.

(Note) Input of the simulation 48-02 set value can be performed only in the range of 0 ~ 30.

(Display contents)

|                                                                                       |           |
|---------------------------------------------------------------------------------------|-----------|
| SIMULATION No.48                                                                      | 4 8 * * * |
| INPUT 1-5                                                                             |           |
| 1. Front/rear direction magnification ratio adjustment                                |           |
| 2. Paper transport direction magnification ratio adjustment (mirror speed correction) |           |
| 3. Lens characteristics input                                                         |           |
| 4. No.4/No.5 mirror characteristics input                                             |           |
| 5. Mirror speed correction value input                                                |           |



## (6) Zoom correction value input (Simulation 48-01A, 48-01C, 48-01E, 48-01F)

### <Characteristics input>

Each lens has variations in its focal distance, and the lens shift distance in zoom copying must be determined according to its focal distance. If the lens shift distance in zoom copying is fixed regardless of variations in the lens focal distance, the copy magnification ratio varies according to the variations in the lens focal distance.

To prevent this, the lens focal distance ranks (see the table in the following page) are stored in memory. When making a zoom copy, the lens shift distance is calculated according to the lens focal distance using the stored data to perform correct zoom copying.

### <When the lens is replaced>

- Set the correction value for the lens value referring to the "Table of comparison between lens value and simulation input value" in the following page.

With  $\boxed{C} \rightarrow \boxed{=J} \rightarrow \boxed{0/0} \rightarrow \boxed{=J} \rightarrow \boxed{4} \rightarrow \boxed{8} \rightarrow \boxed{PSW} \rightarrow \boxed{1} \rightarrow$

$\boxed{PSW} \rightarrow \boxed{\rightarrow}$  keys, select A (focus correction), and the preset value (1 ~ 21) is displayed in the COPIES MADE display.

- Enter the new set value.

Example: When the lens P.NO value is +14, the correction value for sim. 48-01A is 29 using the comparison table.

Perform the key operation as follows:

$\boxed{2} \rightarrow \boxed{9} \rightarrow \boxed{PSW}$

Similarly perform the key operation as follows:

With  $\boxed{C} \rightarrow \boxed{=J} \rightarrow \boxed{0/0} \rightarrow \boxed{=J} \rightarrow \boxed{4} \rightarrow \boxed{8} \rightarrow \boxed{PSW} \rightarrow \boxed{1} \rightarrow$

$\boxed{PSW} \rightarrow \boxed{\rightarrow}$  keys, select C, E and F and enter the correct set values.

(When the focus or the magnification ratio is incorrect in zoom copying)

If the focus or the magnification ratio is incorrect with the above correction value, follow the procedure below:

- When the focus at 50% is incorrect, change simulation 48-01 C value by one rank.
- When the focus at 200% is incorrect, change simulation 48-01 F value by one rank.
- When the magnification ratio at 50% is incorrect, change simulation 48-01 A value by one rank.
- When the magnification ratio at 200% is incorrect, change simulation 48-01 E value by one rank.

☆ Simulation 48-01 C and F are for No. 4/No. 5 mirror shift correction (focus), and simulation 48-01 A and E are for lens shift correction (magnification ratio).

&lt;Table A: Comparison between lens value and simulation input value&gt;

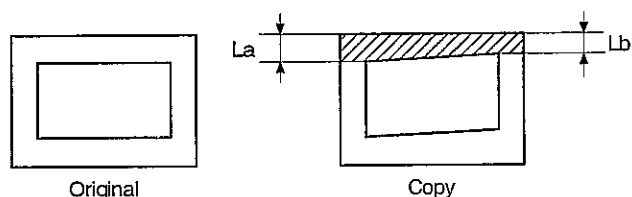
| Lens value (OL, OI) | sim, 48-01 B | sim, 48-01 D | Lens value (OL, OI) | sim, 48-01 B | sim, 48-01 D |
|---------------------|--------------|--------------|---------------------|--------------|--------------|
| -8.8 ~ -7.6         | 94 ~ 88      | 104 ~ 98     | +0.4 ~ +1.2         | 48 ~ 44      | 58 ~ 54      |
| -7.6 ~ -6.8         | 88 ~ 84      | 98 ~ 94      | +1.2 ~ +2.0         | 44 ~ 40      | 54 ~ 50      |
| -6.8 ~ -6.0         | 84 ~ 80      | 94 ~ 90      | +2.0 ~ +2.8         | 40 ~ 36      | 50 ~ 46      |
| -6.0 ~ -5.2         | 80 ~ 76      | 90 ~ 86      | +2.8 ~ +3.6         | 36 ~ 32      | 46 ~ 42      |
| -5.2 ~ -4.4         | 76 ~ 72      | 86 ~ 82      | +3.6 ~ +4.4         | 32 ~ 28      | 42 ~ 38      |
| -4.4 ~ -3.6         | 72 ~ 68      | 82 ~ 78      | +4.4 ~ +5.2         | 28 ~ 24      | 38 ~ 34      |
| -3.6 ~ -2.8         | 68 ~ 64      | 78 ~ 74      | +5.2 ~ +6.0         | 24 ~ 20      | 34 ~ 30      |
| -2.8 ~ -2.0         | 64 ~ 60      | 74 ~ 70      | +6.0 ~ +6.8         | 20 ~ 16      | 30 ~ 26      |
| -2.0 ~ -1.2         | 60 ~ 56      | 70 ~ 66      | +6.8 ~ +7.6         | 16 ~ 12      | 26 ~ 22      |
| -1.2 ~ -0.4         | 56 ~ 52      | 66 ~ 62      | +7.6 ~ +8.8         | 12 ~ 8       | 22 ~ 16      |
| -0.4 ~ +0.4         | 52 ~ 48      | 62 ~ 58      |                     |              |              |

&lt;Table B: Comparison between P. NO value and simulation input value&gt;

| P. NO | Sim 48-01 A | Sim 48-01 C | Sim 48-01 E | Sim 48-01 F |
|-------|-------------|-------------|-------------|-------------|
| 1     | 15          | 21          | 10          | 21          |
| 2     | 16          | 21          | 10          | 21          |
| 3     | 17          | 22          | 11          | 22          |
| 4     | 18          | 22          | 11          | 22          |
| 5     | 19          | 23          | 12          | 23          |
| 6     | 21          | 23          | 12          | 23          |
| 7     | 22          | 24          | 13          | 24          |
| 8     | 23          | 24          | 13          | 24          |
| 9     | 24          | 25          | 14          | 25          |
| 10    | 25          | 26          | 15          | 26          |
| 11    | 26          | 26          | 15          | 26          |
| 12    | 27          | 27          | 16          | 27          |
| 13    | 28          | 27          | 16          | 27          |
| 14    | 29          | 28          | 17          | 28          |
| 15    | 30          | 28          | 17          | 28          |
| 16    | 31          | 29          | 18          | 29          |
| 17    | 32          | 29          | 18          | 29          |
| 18    | 34          | 30          | 19          | 30          |
| 19    | 35          | 30          | 19          | 30          |
| 20    | 36          | 31          | 20          | 31          |
| 21    | 37          | 31          | 20          | 31          |

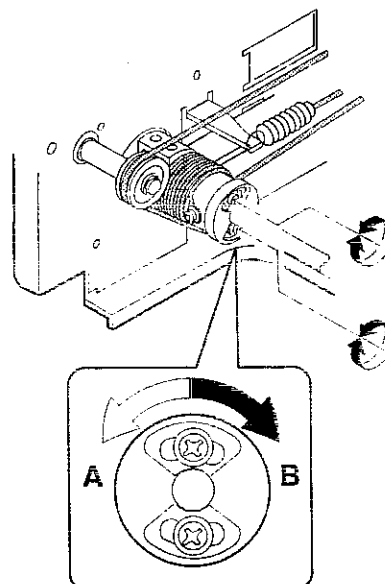
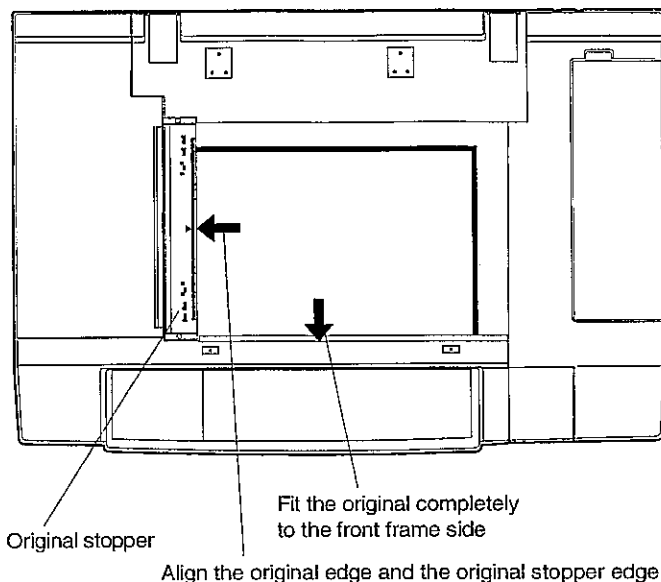
## (7) Vertical skew adjustment

This adjustment is performed in the following cases.



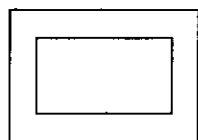
- When the mirror base drive wire is replaced.
- When No. 1 mirror base or No. 2 mirror base is replaced.

- ① Set an A3 (11" × 17") white paper on the original table, align the paper edge with the original stopper edge and slide the paper completely to the front frame side.
- ② With the original cover open, make a normal copy (× 1.0) onto A3 or 11" × 17" paper.
- ③ Measure the width of the black ground at the lead edge and the trail edge.  
If the lead edge black ground width (La) is equal to the trail edge black ground width (Lb), there is no need for adjustment.  
If (La) does not equal (Lb), proceed to Step 4.
- ④ Loosen the fixing screw of the mirror base drive pulley at the rear frame side.  
If  $La > Lb$ , rotate the rear frame side mirror base drive pulley in the direction of arrow A. (Do not move the flange and the mirror base drive pulley shaft.)  
If  $La < Lb$ , rotate the rear frame side mirror base drive pulley in the arrow direction B. (Do not move the flange and the mirror base drive pulley shaft.)
- ⑤ Tighten the mirror base drive pulley fixing screw.
- ⑥ Perform procedures ① to ③.
- ⑦ If La is not equal to Lb, perform ④ and ⑤ again. (If  $La = Lb$ , the adjustment is completed.)  
Repeat procedures ① to ⑥ until  $La = Lb$ .

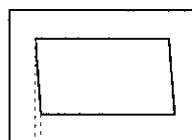


## (8) Horizontal skew adjustment

When there is no vertical skew (in the mirror base scanning direction) but there is horizontal skew (improper rectangularity to the scanning direction), adjust the No. 2/No. 3 mirror base unit rail height and the No. 4/No. 5 mirror base unit eccentric screw. This adjustment must be performed in the following cases.



Original

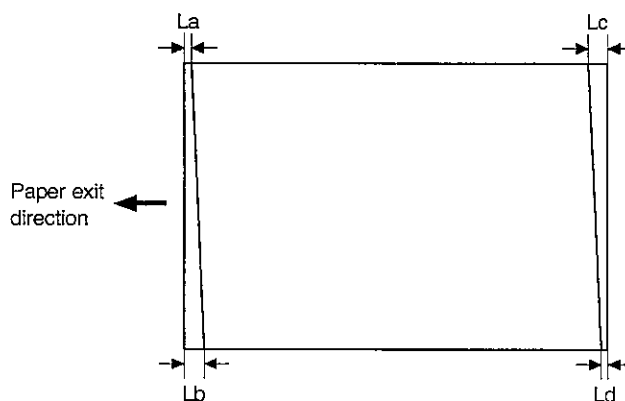
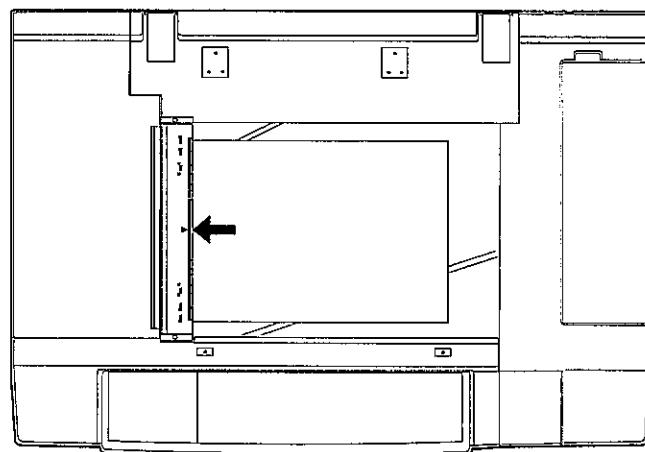
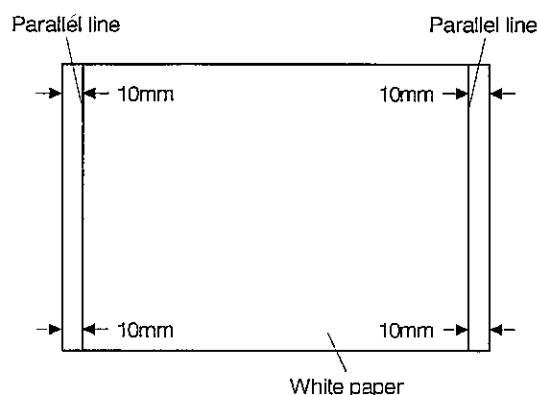


Copy

- When the mirror base drive wire is replaced.
- When the No. 1 mirror base or the No. 2 mirror base is replaced.
- When the No. 2 mirror base rail is replaced or shifted.

### ① Preparing of an original for the adjustment

Draw 2 parallel lines as shown below. The lines should be drawn 10cm from each side of an A3 (11" × 17") paper.



- ② Make a normal copy ( $\times 1.0$ ) on A3 (11" × 17") paper.
- ③ Measure the distances (La, Lb, Lc, and Ld) on the copy paper as shown in the figure.  
When  $La = Lb$  and  $Lc = Ld$ , there is no need for adjustment.

#### Adjustment procedure

When  $La > Lb$  ( $Lc < Ld$ ): →

Turn the eccentric screw to increase the height of the No. 4/No. 5 mirror base unit front frame side.

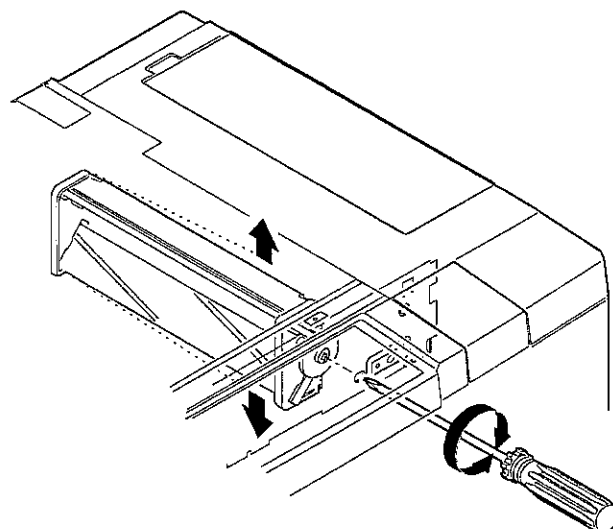
When  $La < Lb$  ( $Lc > Ld$ ): →

Turn the eccentric screw to decrease the height of the No. 4/No. 5 mirror base unit front frame side.

Check how much the eccentric screw is turned. (One rotation of the eccentric screw changes the height by 2mm and changes the difference ( $La - Lb$ ) by 4mm.)

※ Open the front cabinet and insert a screwdriver through the adjustment hole to turn the screw.

If horizontal skew cannot be corrected using the above adjustment, then perform the following adjustment.



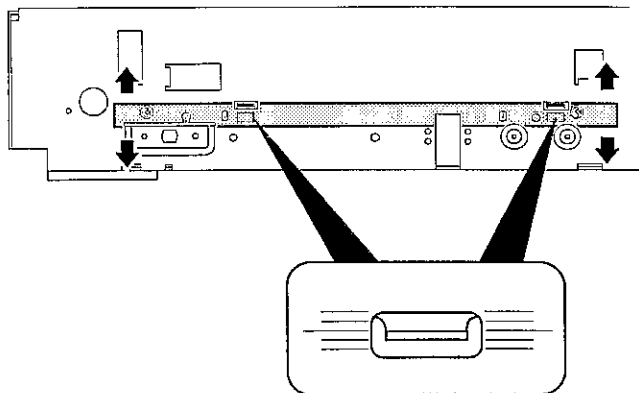
### Adjustment procedure

- ① Shift the mirror base B rail up and down to adjust.
    - If  $L_a > L_b$ , shift the paper exit side mirror base B rail upwards half of the difference.  $[(L_a - L_b)/2]$
    - If  $L_a < L_b$ , shift the paper exit side mirror base B rail downward half of the difference.  $[(L_a - L_b)/2]$

Example: When  $L_a = 12\text{mm}$  and  $L_b = 9\text{mm}$ , shift the paper exit side mirror base B rail upward 1.5mm.

    - If  $L_c > L_d$ , shift the paper feed side mirror base B rail downward half of the difference.  $[(L_c - L_d)/2]$
    - If  $L_c < L_d$ , shift the paper feed side mirror base B rail upward half of the difference.  $[(L_c - L_d)/2]$

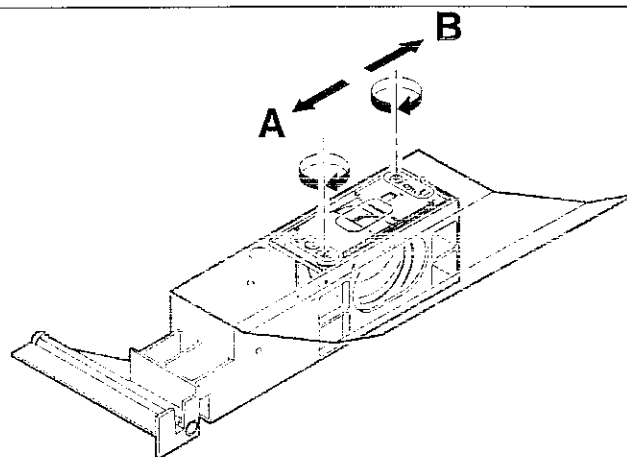
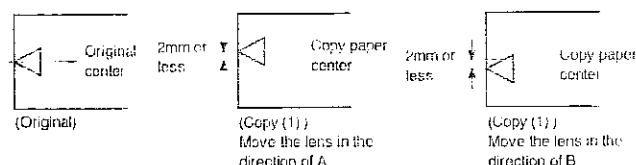
(When shifting the mirror base rail, hold the mirror base rail grip.)
  - ② Adjust as stated in ① so that  $L_a = L_b$  and  $L_c = L_d$ .
  - ③ After completion of the adjustment, manually turn the mirror base drive pulley to scan mirror base A and mirror base B fully to check that the mirror bases do not make contact with each other.
- (Note) If the mirror base rail is moved extremely, the mirror base unit may contact with the optical frame.



### (9) Center shift adjustment

Make a normal copy and shift the lens in the arrow direction so that the copy center shift is within 2mm from the original center image.

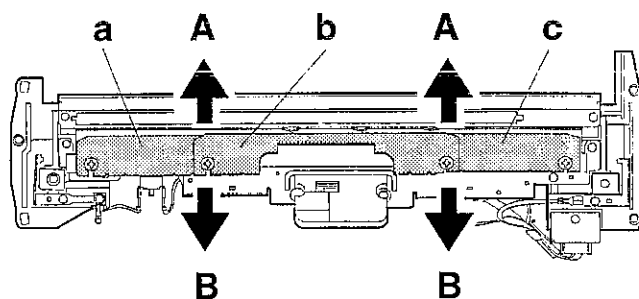
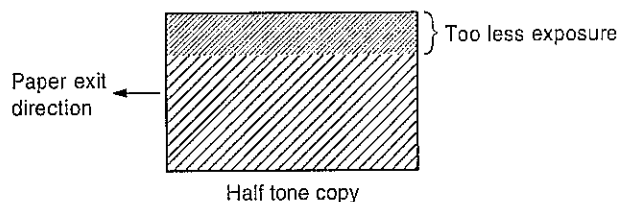
(Note) When the lens is shifted, the blank lamp position adjustment must be performed. This is because the blank lamp center is shifted due to the shift in the original center reference position.



### (10) Exposure balance adjustment

Make a half tone copy at normal ratio, and shift exposure adjustment plates a, b, c in the direction of arrows A and B. Moving the plate in the direction of A, exposure becomes darker. Moving the plate in the direction of B, exposure becomes lighter.

Example: If the following copy is made, move exposure adjustment plate a in the direction of B, to correct the exposure balance.



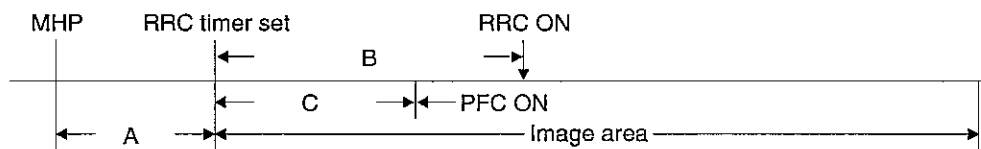
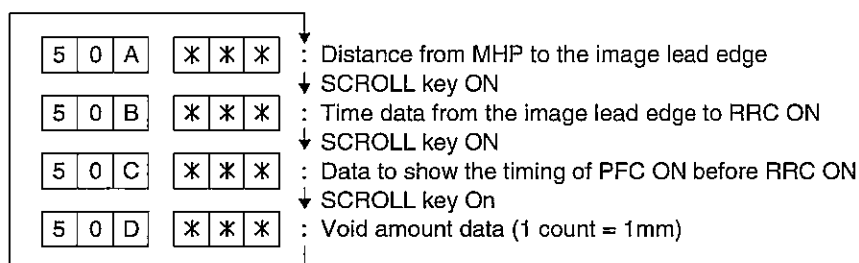
## (11) Copy lead edge adjustment

The lead edge adjustment can be performed using simulation 50-01 or 50-02.

(In normal copy) Image loss 0 ~ 3mm

Void area 1 ~ 3mm

### (Setting with simulation 50-01)



A: 50A data (RRC-A)

B: 50B data (RRC-B)

C: 50C data (PFC: before RRC)

※ SCROLL key is used for selection only, and the program key is use

### Adjustment procedure

① Put a scale on the original table.

② Perform the following key operation.

**[C]** → **[=]** → **[0/0]** → **[=]** → **[5]** → **[0/0]** → **[PSW]** → **[1]** →

**[PSW]** (Simulation 50 is executed.)

The ready lamp lights up and the preset value (1 ~ 99) is displayed.

RRC-A contents: (2 digits) is displayed in the COPIES MADE display.

③ Set both of value A and B to 0, and make one copy each in the magnification ratios of 100% and 200%.

• **[0/0]** → **[0/0]** → **[P]** → **[→]** → **[0/0]** → **[0/0]** → **[PSW]**

(A normal copy (100%) is made.)

• **[Enlargement key]** → (After shifting the lens, ready) →

**[PSW]** (An enlarged copy (200%) is made.)

④ Measure the distance between the lead edge of the paper and the image (scale) lead edge, and obtain RRC-A and RRC-B from the following formula.

If the RRC-A preset value is not correct, the lead edge position varies in different magnification ratios.

The RRC-B value is the preset value to adjust the RRC ON timing for aligning the copy paper lead edge and the drum image lead edge.

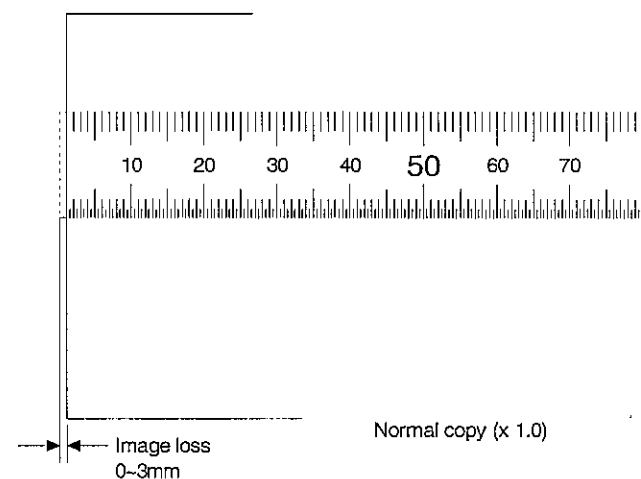
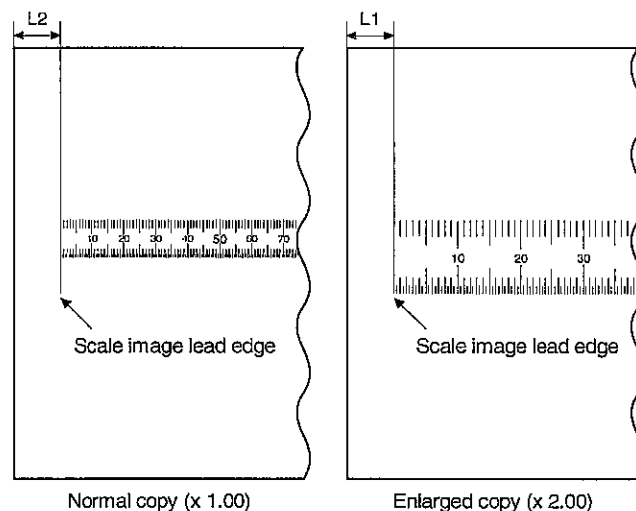
- L1: 200% lead edge shift amount [mm]
- L2: 100% lead edge shift amount [mm]
- $RRC-A = 4.7222 \times (L1 - L2)$
- $RRC-B = (7.2202 \times L2) - (3.6101 \times L1)$

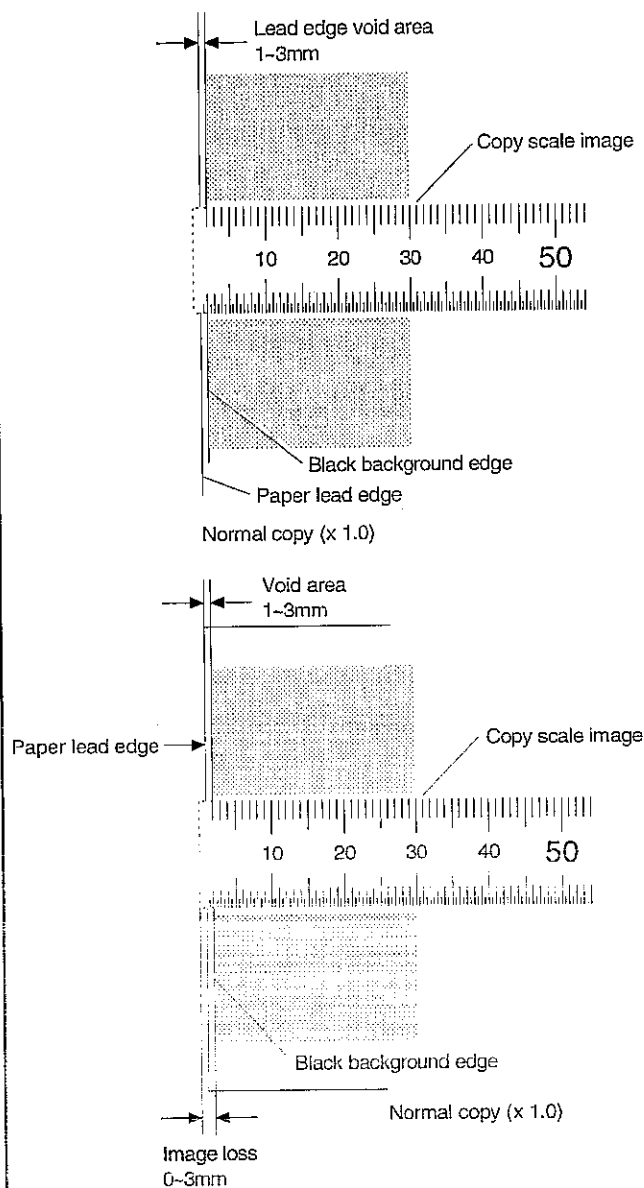
⑤ Enter the RRC-A and RRC-B values obtained above using the 10 keypad. For the key operations, refer to the procedure ③.

⑥ Make copies at the magnification ratios of 200%, 100% and 50%, and check variations in zooming copy. (About 1.0mm)  
If there is an abnormally large variation, repeat procedure ③.

⑦ Make a normal copy and check that the lead edge image loss is within the range of 0 ~ 3mm. If the image is not in the above range, change the RRC-B value so that the image is in the above range.

(Note): The above image loss adjustment value is the adjustment value for simulation, and is not the final adjustment value.





⑧ Place a scale and an A3 (11" × 17") white paper on the original table as shown below:

⑨ Press the SCROLL DISPLAY key to set the LCD display to the void amount adjustment mode (50D).

⑩ Make a copy and enter the normal copy (× 1.00) lead edge void area adjustment preset value so that the width of the lead edge void area measures 1 ~ 3mm.

$\square \rightarrow \square \rightarrow \text{PSW}$

With the above key operation, a copy is made and the key input value is set. Changing the set value by 1 changes the void area about 0.5mm. If the set value is increased, the void amount is also increased.

Simulation 50D accepts input in the range of 0 ~ 20.

## (12) AE sensor adjustment

The reference output value of the AE sensor is stored in memory using the following procedure.

① Put four or five sheets of white paper (11" × 17" or A3) on the table glass. (Use clean white paper and do not use recycled paper.)

⑪ Make a normal copy and check that the void area is within the specified range.

(Specified range)

Image loss: 0 ~ 3mm

Void area: 1 ~ 3mm

⑫ Press CLEAR key to terminate simulation 50-01.

(Note) Whenever the preset values of RRC-A or RRC-B are changed by simulation 50-01, be sure to perform the copy lead edge void area adjustment.

## (Setting with simulation 50-02)

The keys and the display functions are the same as those of simulation 50-01.

In simulation 50-02, L1 and L2 values are directly entered, allowing simplified lead edge adjustment.

The void area adjustment is also the same as in 50-01.

## Adjustment procedure

① Place a scale on the original table.

②  $\square \rightarrow \square \rightarrow 0/0 \rightarrow \square \rightarrow 5 \rightarrow 0/0 \rightarrow \text{PSW} \rightarrow 2 \rightarrow \text{PSW}$

With the above key operation, the machine goes into simulation 50-02 mode and starts warming up.

- L1: 200% lead edge shift amount (000 mm: 3 digits)
- L2: 100% lead edge shift amount (XXX mm: 3 digits)

③ Use the message scroll key, the program key, and 10 keypad to set both values of A and b to 0. Then make a copy in each magnification ratio of 100% and 200%.

•  $0/0 \rightarrow 0/0 \rightarrow 0/0 \rightarrow \text{P} \rightarrow \rightarrow 0/0 \rightarrow 0/0 \rightarrow 0/0 \rightarrow \text{PSW}$  (A normal copy (100%) is made.)

•  $\text{Enlargement key} \rightarrow (\text{Lens shift, ready}) \rightarrow \text{PSW}$  (An enlarged copy (200%) is made.)

④ Measure the distance between the paper lead edge and the image (scale) lead edge on each copy of 200% and 100%. Enter L1 and L2 values using the SCROLL DISPLAY key, and 10 key. With this, RRC-A and RRC-B values of simulation 50-01 are automatically calculated and stored in memory.

Entering procedure

Example

When L1 = 24.5mm and L2 = 15.0mm,

$2 \rightarrow 4 \rightarrow 5 \rightarrow \rightarrow 1 \rightarrow 5 \rightarrow \text{P} \rightarrow 0 \rightarrow \text{PSW}$

⑤ Next, perform the copy lead edge void adjustment in the same manner as simulation 50-01.

② Perform simulation 47.

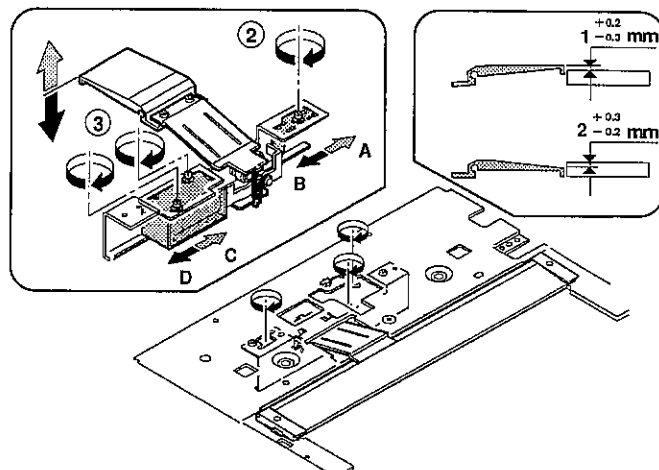
$\square \rightarrow \square \rightarrow 0/0 \rightarrow \square \rightarrow 4 \rightarrow 7 \rightarrow \text{PSW}$

(The lamp unit stops at the AE sensor level measuring point (moving about 210mm), and the ready lamp lights up.)

③ Press the ready lamp again. (Registration of the AE reference output value is completed.)

**(13) Original stopper adjustment****Original stopper height adjustment**

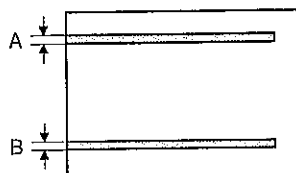
- ① Remove the upper cabinet (left). (3 screws)
- ② Adjust the original stopper stop position when the original stopper solenoid (DSS) is OFF.  
When the screw is loosened and moved in direction A, the original stopper rises.  
When the screw is loosened and moved in direction B, the original stopper descends.
- ③ Adjust the original stopper stop position when the original stopper solenoid (DSS) is ON.  
When the two screws are loosened and moved in direction C, the original stopper rises.  
When the two screws are loosened and moved in direction D, the original stopper descends.  
Perform procedures ② and ③, and adjust so that the height from the top of the glass is  $+2^{+0.3}_{-0.2}$  mm when the solenoid is OFF, and  $-1^{+0.3}_{-0.2}$  mm when the solenoid is ON.



### 3. Process section adjustments

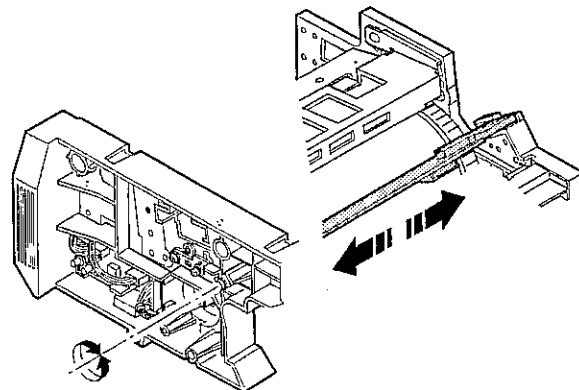
#### (1) Blank lamp (BL) position adjustment

- ① Check that center shift is 2.0 mm or less. (If center shift is more than 2.0 mm, adjust center shift.)
- ② Set a sheet of white paper of A3 (11" x 17") on the table glass. Make a reduction copy (x 0.64) onto A3 (11" x 17") paper with the original cover open.
- ③ Measure width of the black background at both sides of the copy. Adjust the blank lamp unit position back and forth so that the size difference is within 1 mm.



$$(A-B) \leq 1\text{mm}$$

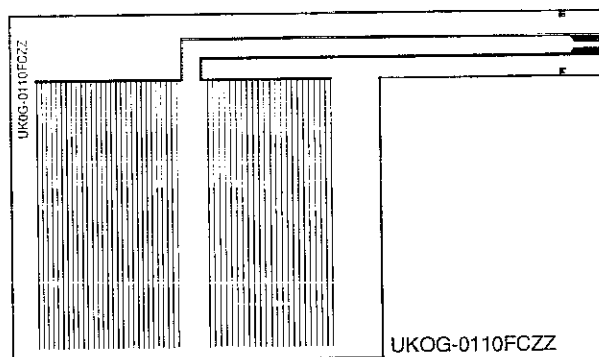
Adjustment screw 1 scale: 0.5 mm change  
Adjustment screw 1/2 scale: 0.25 mm change



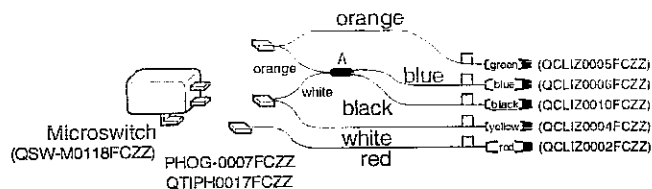
#### (2) High voltage output, balance adjustment

##### A. Use of the special tool

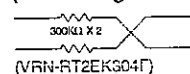
Electrode sheet (UKOG-0110FCZZ)



Electrode sheet harness (DHAI-0304FCZZ)



(Circuit diagram of A-portion)

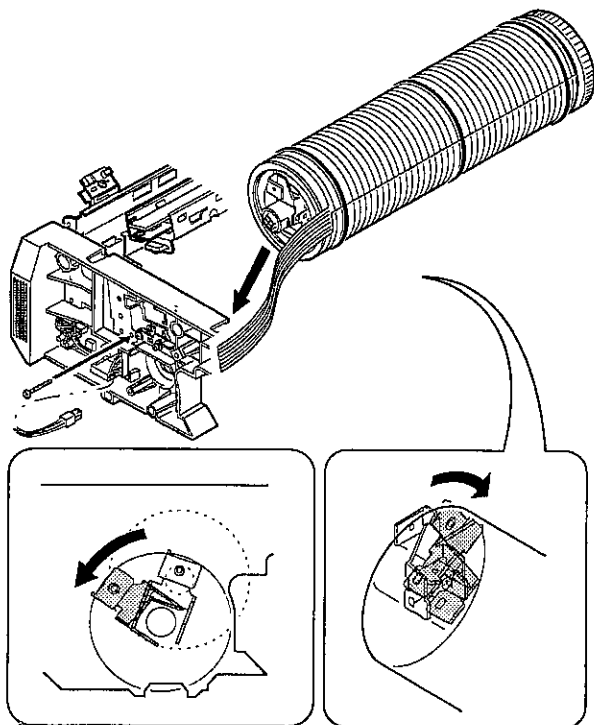


Use the drum current measuring jig to measure the drum surface current and front/rear balance of each charger. Adjust according to the table below:

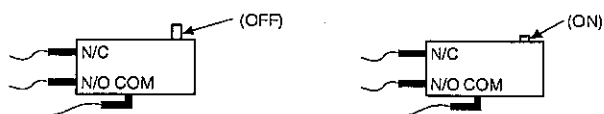
| Adjustment output | Sim | Adjustment range | F/R difference | Tester range |
|-------------------|-----|------------------|----------------|--------------|
| MC drum current   | 8-2 | —                | 10μA or less   | DC1000μA     |
| TC drum current   | 8-6 | -55±5μA          | 7μA or less    | DC1000μA     |
| PTC drum current  | 8-5 | +15±5μA          | 5μA or less    | DC1000μA     |

## B. Transfer charger current adjustment (TC)

- ① Remove the developer unit, cleaner unit, transfer/separation charger unit, and main charger unit from the main body.
- ② Remove the process unit from the main body. Remove the cleaner unit.
- ③ Remove the photoconductor drum from the process unit, and attach the electrode sheet with rubber band and tape.
- ④ Attach the photoconductor drum (with the electrode sheet attached to it) to the process unit.



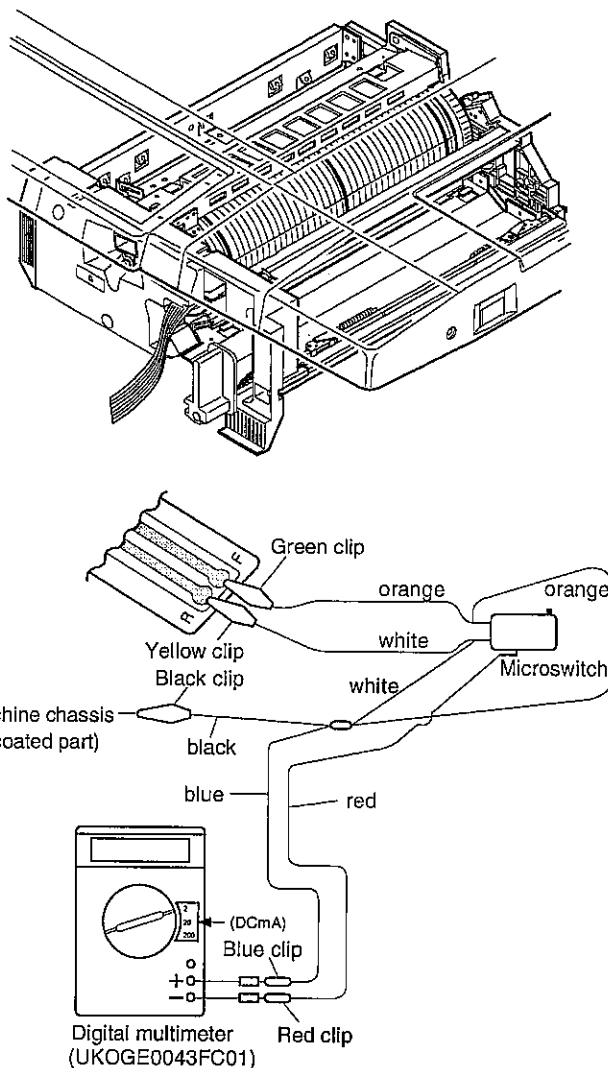
- ⑤ Install the drum holder unit to the main body so that it can be removed from the developer unit side of the electrode sheet lead section.
- ⑥ Clean the transfer charger wire, and install the transfer/separation charger unit to the main body.  
(Do not install the main charger unit.)
- ⑦ Connect the electrode sheet to the digital multi meter (or connect to an ammeter.) Manually turn ON the door switch.
- ⑧ Check the drum current in the front frame side and the rear frame side. The difference in current between the front and rear frame sides: Within  $7.0\mu\text{A}$ 
  - a. Turn on the main switch, and perform simulation 8-06. (THVG turns on for about 30 sec.)
  - b. Measure the drum current at the front frame side and at the rear frame side.
    - When the microswitch is OFF, the drum current at the front frame side is displayed.
    - When the microswitch is ON, the drum current at the rear frame side is displayed.



- c. Check that the difference in the front and rear frame currents is within  $7.0\mu\text{A}$ . If the difference is greater than  $5.0\mu\text{A}$ , replace the charger unit, which is defective.

### ⑨ Adjust the THVG output current.

- a. Turn on the main switch and perform simulation 8-06. (THVG turns on for about 30 sec.)
- b. Change the input value so that the THVG output becomes  $-55 \pm 5\mu\text{A}$ .  
Adjustment range: 3 ~ 56



(Note) Check that the black clip is grounded to the machine chassis securely.

When using UKOGE0043CS01:

Knob 1: Set to DCmA.

Knob 1: Set to 2.

Red clip: Connect to  $\ominus$ .

Blue clip: Connect to  $\oplus$ .

When using a DC ammeter:

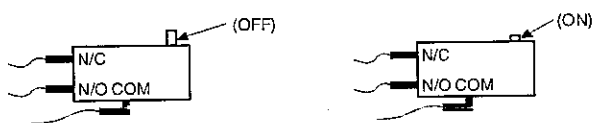
Red clip: Connect to  $\ominus$  of the ammeter.

Blue clip: Connect to  $\oplus$  of the ammeter.

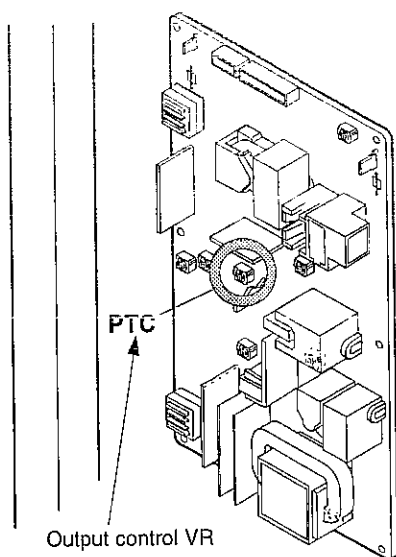
### C. Charger current check

Check drum current difference (balance) in the front and rear frame sides.

- ① Perform (3)-B-① ~ ⑤.
- ② Clean the saw tooth blade of the main charger, and install the main charger to the main body.  
(Remove the transfer/separation charger.) Manually turn on the door switch.
- ③ Check the drum current at the front and the rear frame sides.  
Current difference between the front and the rear frame sides: within  $10.0\ \mu\text{A}$ 
  - a. Turn on the main switch and perform simulation 8-02.  
(MHVG turns on for about 30 sec.)
  - b. Measure the drum current at the front and the rear frame sides.
    - When the microswitch is OFF, the drum current at the front frame side is displayed.
    - When the microswitch is ON, the drum current at the rear frame side is displayed.



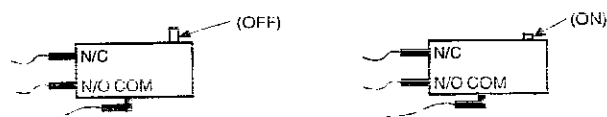
- c. Check that the difference between the front and rear frame currents is within  $10.0\ \mu\text{A}$ . If the difference is greater than  $10.0\ \mu\text{A}$ .  
Adjust with the height adjustment mechanism provided in the process unit.



### D. Pre-transfer charger current adjustment (PTC)

- ① Remove the developer unit, transfer/separation charger unit, and main charger unit from the main body.
- ② Remove the process unit from the main body.
- ③ Remove the photoconductor drum from the process unit, and attach the electrode sheet with rubber band and tape.
- ④ Attach the photoconductor drum (with the electrode sheet attached to it) to the process unit.
- ⑤ Install the drum holder unit to the main body so that it can be removed from the developer unit side of the electrode sheet lead section.
- ⑥ Clean the pre-transfer charger wire.  
(Do not install the main charger unit or the transfer/separation charger unit.)
- ⑦ Connect the electrode sheet and the digital multi meter (or connect to an ammeter.) Manually turn ON the door switch.
- ⑧ Check the drum current at the front frame side and at the rear frame side. Difference in current between the front and rear frame sides: Within  $5.0\ \mu\text{A}$

- a. Turn on the main switch, and perform simulation 8-05.  
(PTHVG turns on for about 30 sec.)
- b. Measure the drum current at the front frame side and at the rear frame side.
  - When the microswitch is OFF, the drum current at the front frame side is displayed.
  - When the microswitch is ON, the drum current at the rear frame side is displayed.



- c. Check that the difference between the front and rear frame currents is within  $5.0\ \mu\text{A}$ . If the difference is greater than  $5.0\ \mu\text{A}$ , replace the charger unit, which is defective.

- ⑨ Adjust the PTHVG output current.
  - a. Turn on the main switch and perform simulation 8-05.  
(PTHVG turns on for about 30 sec.)
  - b. Adjust the PTC output adjustment VR so that the PTHVG output becomes  $+15 \pm 5\ \mu\text{A}$ .

### E. Main Charger grid voltage adjustment

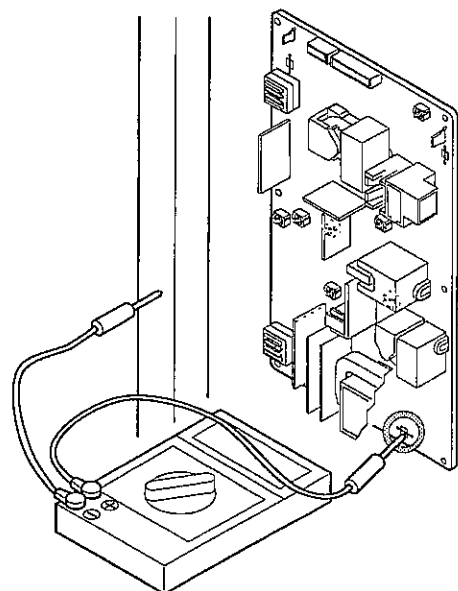
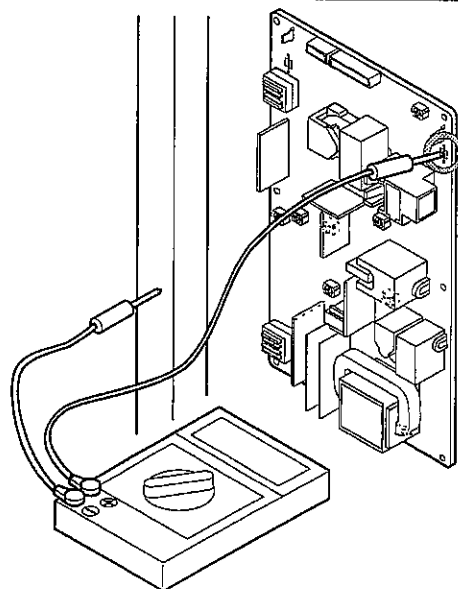
Measure the output using the check terminal on the high voltage PWB and adjust to the range shown in the table below.

For this adjustment, the electrode sheet is not used but the OPC drum is installed.

- ① Install the developer unit, cleaner unit, and the drum holder unit into the copier, and turn on the power. (In this case, the electrode sheet is not attached to the drum.)
- ② Install the main charger unit to the copier. All charger units must be installed in the copier.
- ③ Turn on the main switch and check the grid voltage with simulation 8-02, 8-03, and 8-04.  
The grid voltage set value is displayed in COPIES MADE display.

(Measurement at the high voltage PWB check point)

- ④ Remove the rear cabinet.
- ⑤ Connect the digital multimeter to the grid voltage output check pin (GB CP).
- ⑥ Set the digital multimeter range to DCV. (Use a digital multimeter which can measure up to DC100V.)
- ⑦ Manually turn on the door switch.
- ⑧ Turn on the main switch and perform simulation 8-02 (normal mode), 8-03 (photo mode), and 8-04 (TSM mode).



### F. Separation charger output adjustment

This adjustment is performed without using the electrode sheet.

- ① Install the developer unit, cleaner unit, and the drum holder unit into the copier, and turn on the copier power.
- ② Install the separation charger unit and the drum holder unit into the copier. All charger units must be installed in the copier.
- ③ Remove the rear cabinet.
- ④ Connect the digital multimeter to the SHVG output check pin (BCDC CP).
- ⑤ Set the digital multimeter range to DCV range.
- ⑥ Manually turn on the main switch and perform simulation 8-07. (SHVG turns on for about 30 sec.)
- ⑧ During execution of the simulation, adjust the separation charger output monitor voltage (bias voltage) BCDCCP to  $+320 \pm 20V$ .

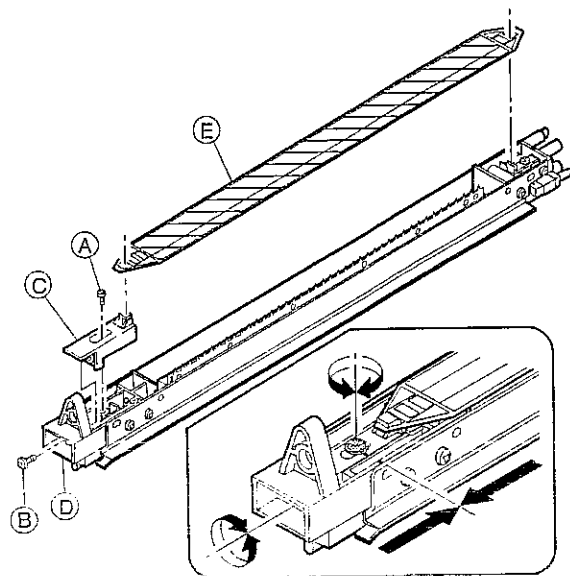
| Adjustment output             | (*) | Adjustment value | Check pin/VR | Tester range |
|-------------------------------|-----|------------------|--------------|--------------|
| MC grid voltage (N)           | 8-2 | $-750 \pm 10V$   | GBCP/VR201   | DC1000V      |
| MC grid voltage (P)           | 8-3 | $-490 \pm 10V$   | GBCP/VR201   | DC1000V      |
| MC grid voltage (T/S)         | 8-4 | $-645 \pm 10V$   | GBCP/VR201   | DC1000V      |
| Separation charger DC voltage | 8-7 | $+320 \pm 20V$   | BCDCCP/VR601 | DC1000V      |

### (3) Notes for high voltage charger units maintenance

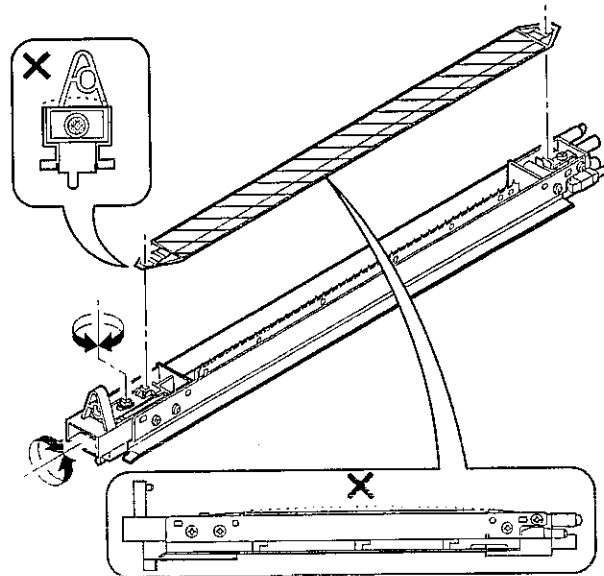
#### A. MC unit

##### ① Grid adjustment procedure

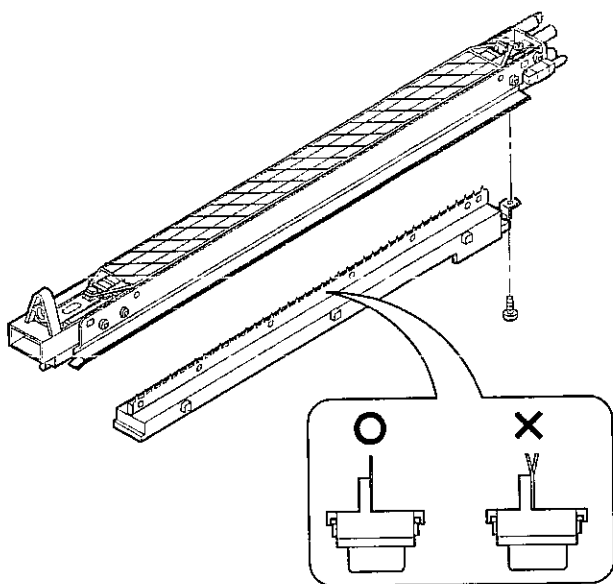
- Fix the grid holder with screw (A) temporarily.
- Position grid (E) and adjust with screw (B).
- Tighten the screw until the marks of grid holder (C) and the MC holder (D) are aligned. Secure screw A



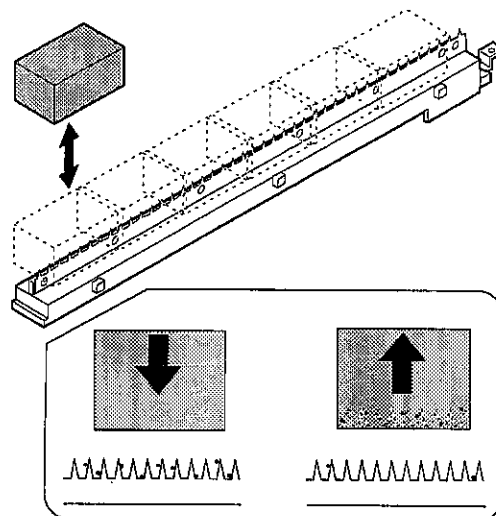
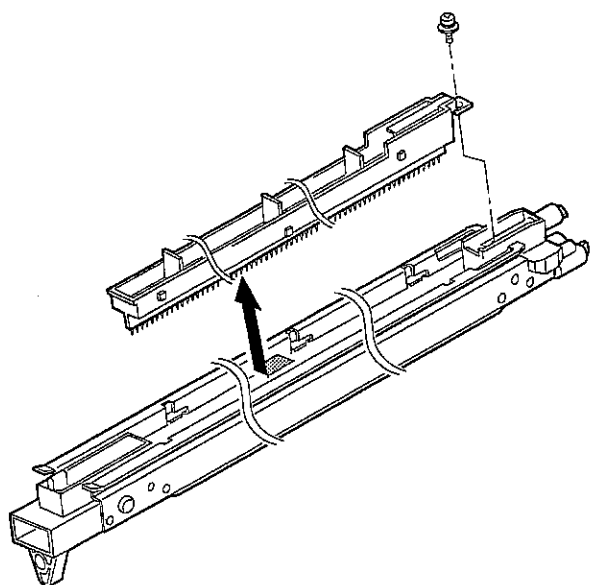
- ② When attaching the screen grid, be careful not to deform or twist it. The screen guide should be free from dirt. Check that screen grid is properly positioned and secured.



- ③ Be careful not to deform the teeth of the saw tooth ass'y.



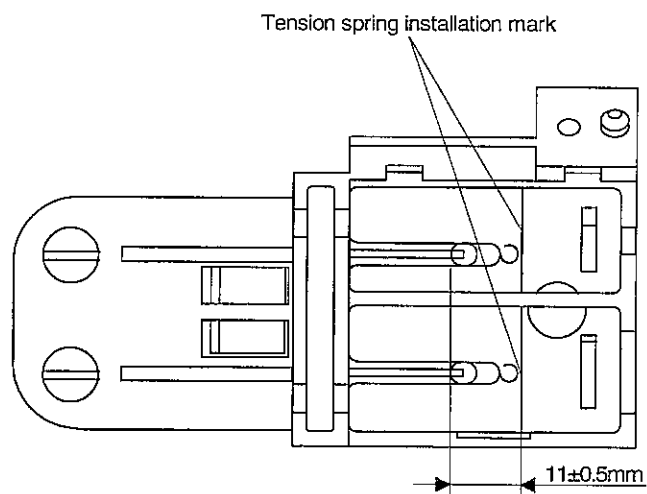
- ④ Do not touch the inside of the MC case (saw-tooth side), the screen grid, and the teeth.
- ⑤ Remove the saw-tooth ass'y from the MC unit. (1 screw)
- ⑥ For cleaning the MC saw-tooth, use styrene foam. Press styrene foam vertically on the teeth to remove dirt.



## B. TC/SC unit, PTC unit

- ① The tension spring length must be  $11 \pm 0.5\text{mm}$ .

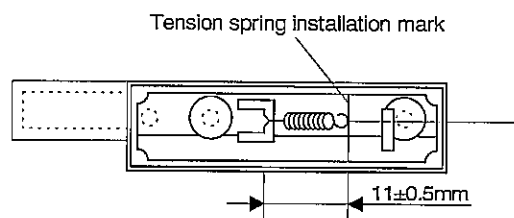
### <TC/SC unit>



TC/SC wire:  
PTC wire:

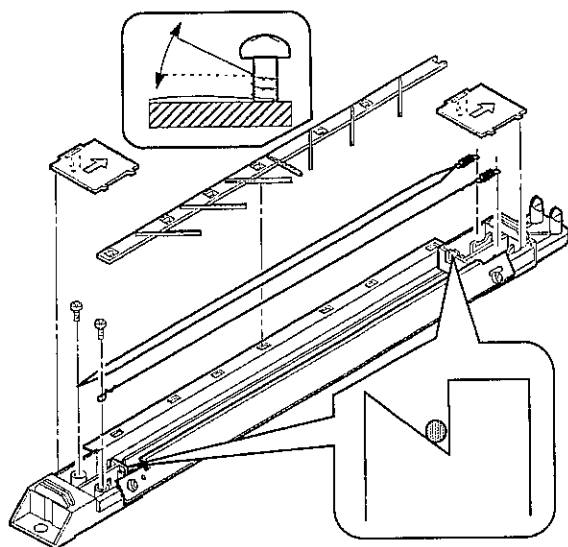
(Tungsten oxide)  
(Platinum wire)

### <PTC unit>

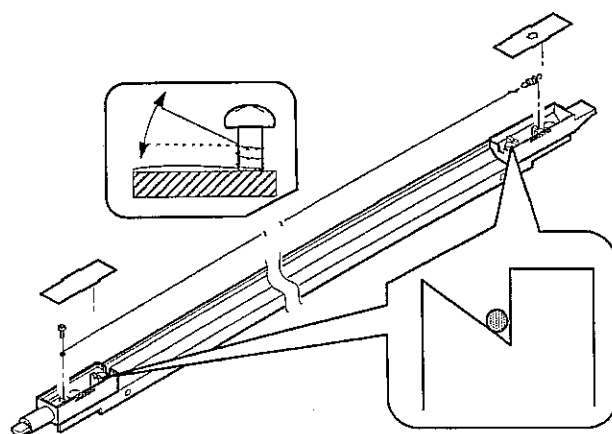


- ② The charger wire must be free from twist and deformation. It must be securely in the wire positioning groove.

&lt;TC/SC unit&gt;



&lt;PTC unit&gt;



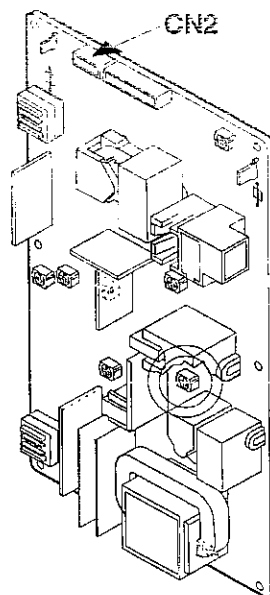
- ③ The charger case must be free from oil dirt or foreign material.  
④ Clean the wire with alcohol.

#### (4) High altitude countermeasures

Since the separation charger output is subject to the constant voltage control, the current increases at high altitudes, operating the current limiter. To prevent against this, voltage selection must be made according to the table below. (The other high voltage outputs are under the constant current control and require no adjustment.)

| Altitude     | High voltage PWB CN2<br>Short pin No.      | Voltage          |
|--------------|--------------------------------------------|------------------|
| 0 ~ 2000m    | 1 - 4                                      | $6.00 \pm 0.2KV$ |
| 2000 ~ 3000m | OPEN (disconnect the connector)            | $5.25 \pm 0.2KV$ |
| 3000m ~      | 3 - 5 (change the positions of short pins) | $5.00 \pm 0.2KV$ |

← When shipped



## 4. Operation panel adjustment

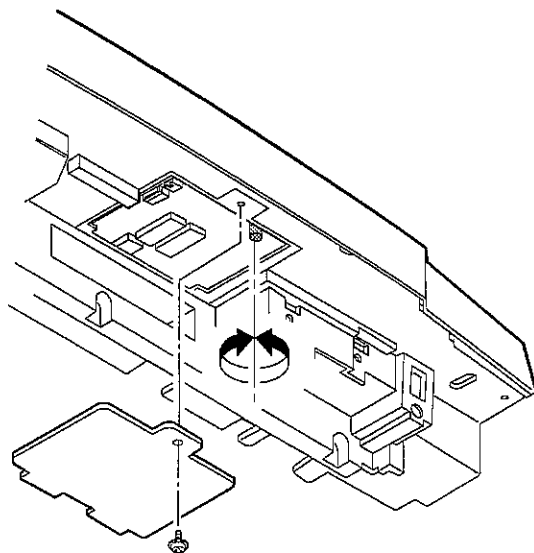
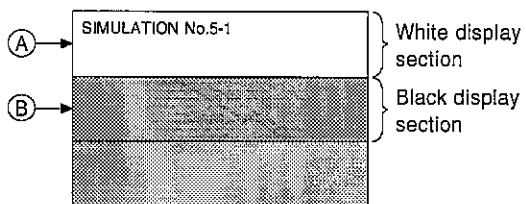
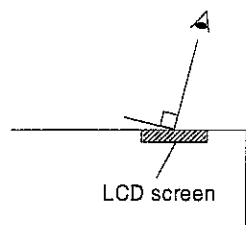
### (1) LCD display contrast adjustment

- ① Perform simulation 5-1 to light the LCD display.
- ② Open the front cabinet.
- ③ Adjust the contrast adjustment volume (VR401) on the operation control PWB.

#### (Standard adjustment level)

When viewed from the front of the LCD display, the following conditions must be satisfied.

- Ⓐ White display section of the LCD screen is clearly white.
- Ⓑ Black display section of the LCD screen is clearly black.



## 5. Paper feed section adjustment

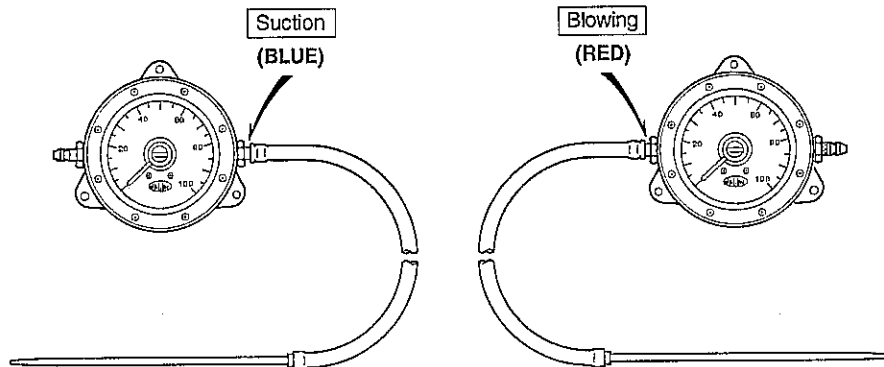
### (1) Suction/blow air pressure measurement

#### (Air pressure standard value)

① Check that the indicator of the pressure gauge shows "0" (mmH<sub>2</sub>O). If not, turn the correction control so that the indicator shows "0".

Pressure gauge and tube (P/N: UKOG-0178FCZZ)

Pressure measurement nozzle: (P/N: UKOG-0179FCZZ)



② The table below shows the specified range at each air pressure measuring point.

|                | Paper feed tray 1 |          | Paper feed tray 2 |          | Paper feed tray 3 |         | Duplex tray |         |
|----------------|-------------------|----------|-------------------|----------|-------------------|---------|-------------|---------|
| Suction duct * | A                 | 13 ~ -23 | C                 | 13 ~ -23 | E                 | 13 ~ 23 | G           | 33 ~ 55 |
| Blower duct    | B                 | 33 ~ 45  | D                 | 33 ~ +45 | F                 | 33 ~ 45 | H           | 33 ~ 45 |
| Simulation No. | 6 → 2 → 1         |          | 6 → 2 → 2         |          | 6 → 2 → 3         |         | 6 → 2 → 4   |         |

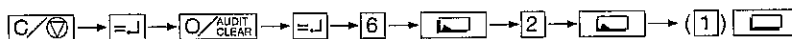
Unit (mmH<sub>2</sub>O)

※ When measuring the suction duct air pressure, be sure to measure with paper sucked onto the paper feed belt.  
If the measured value is outside the specified range, check the following.

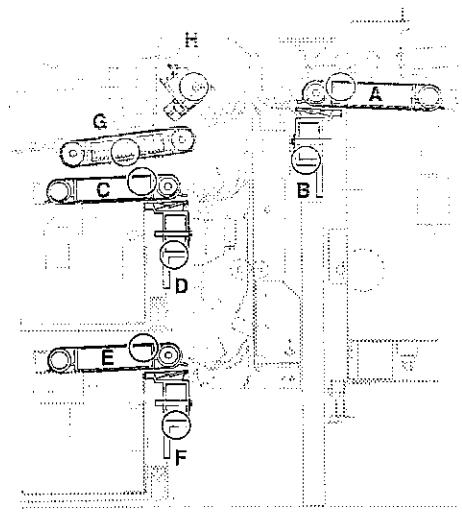
- Does the blower fan /suction fan rotate?
- Does each valve open and close smoothly?
- Are the connectors properly connected?
- Are the solenoids installed to their proper positions? (Do they operate smoothly?)
- Check for breakage in the duct main body, the suction duct, and the blower duct.
- Are the fixing screws of the duct main body, the suction duct, the blower duct, and the duct joint tightened securely?
- Check for air leak in the silencer duct, between the blower fans, and in the duct joint.

#### (Measurement method)

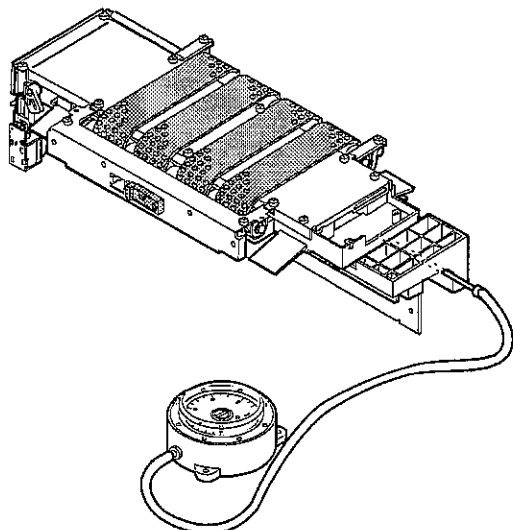
- ① Turn on the front cabinet SW with the front cabinet open.
- ② Pull out the paper feed tray.
- ③ Place a sheet of paper (A4, letter 60~75g) in the paper feed tray in the landscape direction, and close the tray.  
After checking that the tray has risen all the way up, perform the simulation as shown below



Note: Before measuring the duplex suction duct and blower duct air pressure, be sure to remove the vertical transport unit front cabinet and the intermediate tray unit front cover.

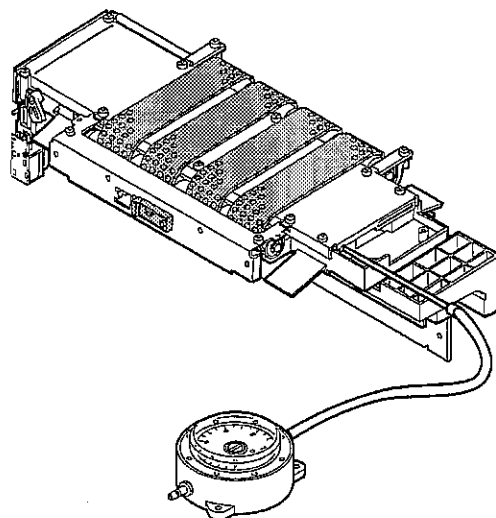


- ⑤ Insert the nozzle into the measurement point and measure the air pressure.  
(Blowing side of No. 1, 2, 3 trays)

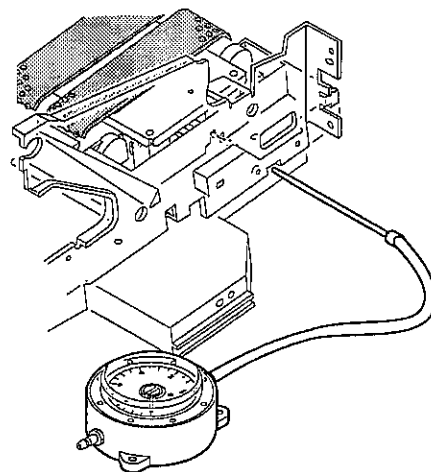
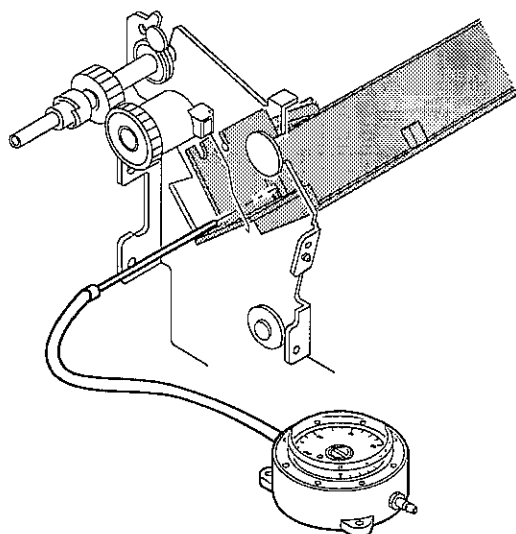


(Blowing side of duplex copy tray)

(Suction side of No. 1, 2, 3 trays)



(Suction side of duplex copy tray)



- ⑥ If the air pressure is within the specified range, press **CA** key to cancel the simulation program.

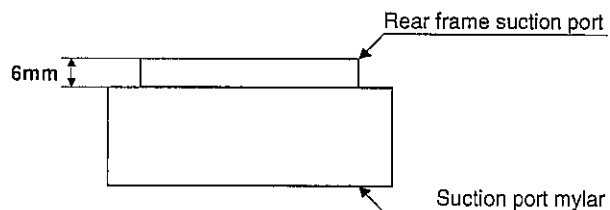
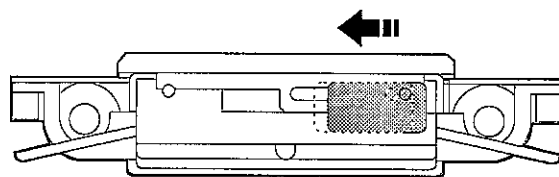
- ⑦ If the air pressure is outside the specified range, adjust as follows:

**<When the suction pressure is too low> (at high altitudes)**

The figure shows the air paper feed suction duct section. Sliding the shaded plate to the left will increase the suction air pressure. When the suction pressure is increased by moving the plate, the blowing pressure is decreased accordingly. After adjustment of the suction air pressure, therefore, be sure to adjust the blowing pressure.

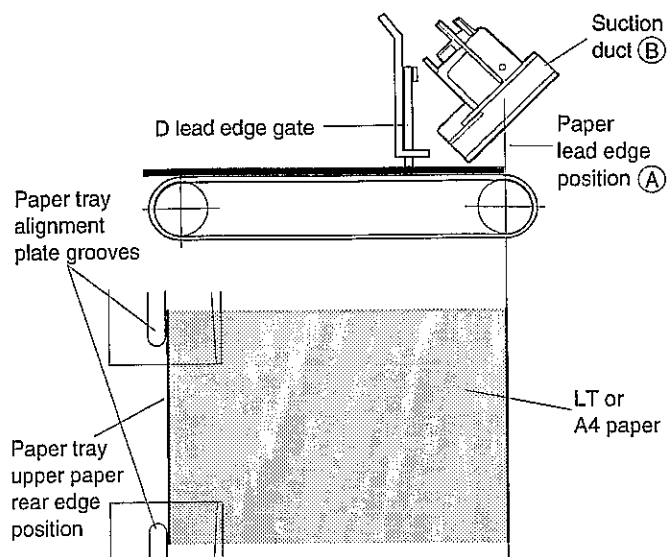
**<When the suction pressure is too high>**

If the suction pressure is below  $-18$  mmH<sub>2</sub>O in the paper feed tray 1 ~ 3, remove the paper feed unit and check the position of the suction port mylar attached to the suction port in the rear frame.



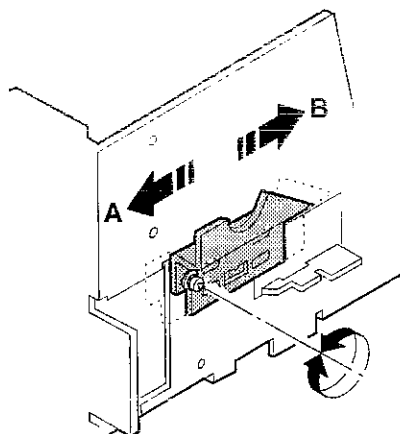
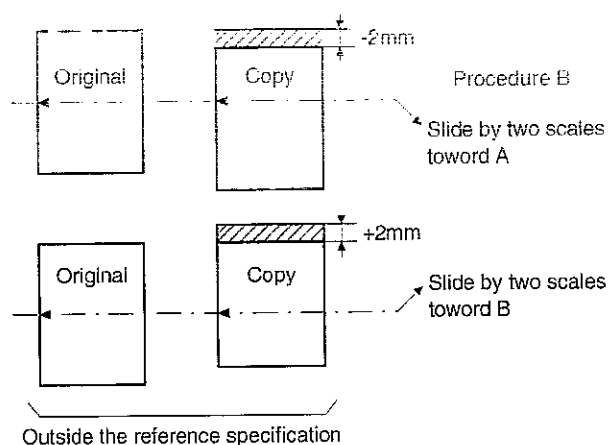
**(Duplex copy tray)**

When measuring the duplex copy tray air pressure, put the paper in contact with the suction section before measurement.

**(2) Center shift adjustment (Tray 1, 2, 3)**

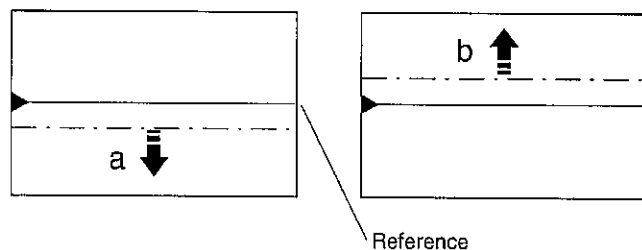
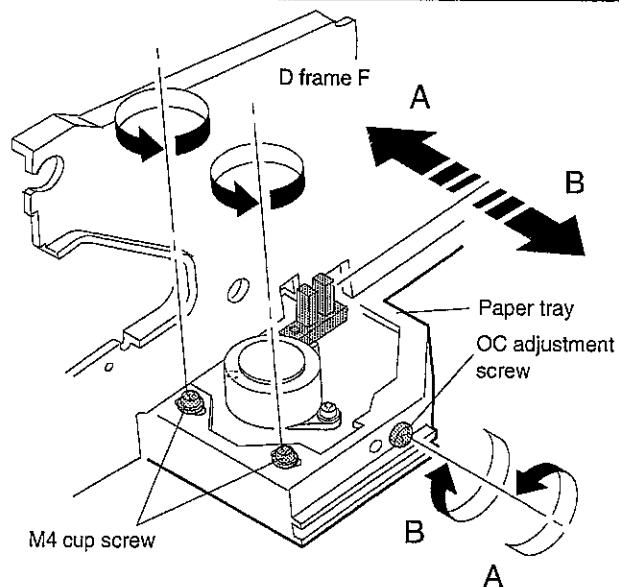
Center the test chart against the original stopper on the original table and make a copy. Check that the copy image shift from the original is within the range of  $0\text{mm} \pm 2\text{mm}$ . If not, slide the mounting position of the paper feed tray mounting plate back and forth to make fine adjustment.

- ① Press the display lamp switch of the paper feed unit to be adjusted. Drive the lift motor, and lower the tray bottom plate. (While the lift motor is driving, the lamp blinks.) After checking that the lamp is off. Slide the tray unit out from the main body.
- ② Change the mounting position of tray mounting plate back and forth to adjust to the reference value.



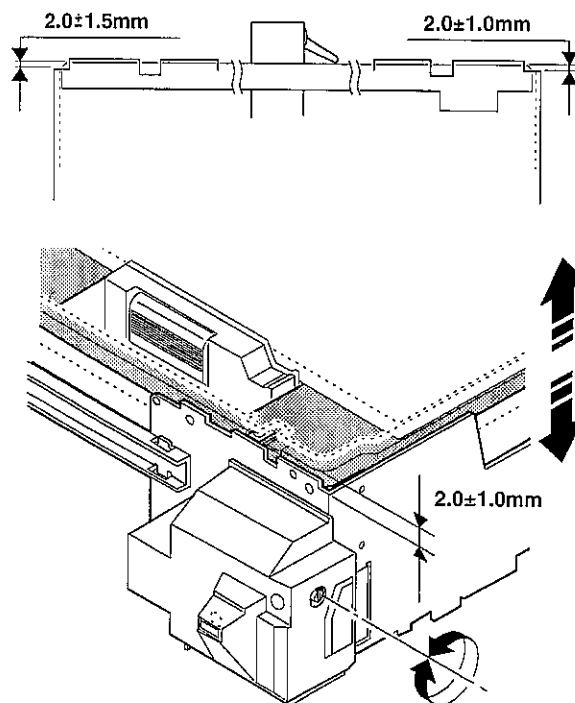
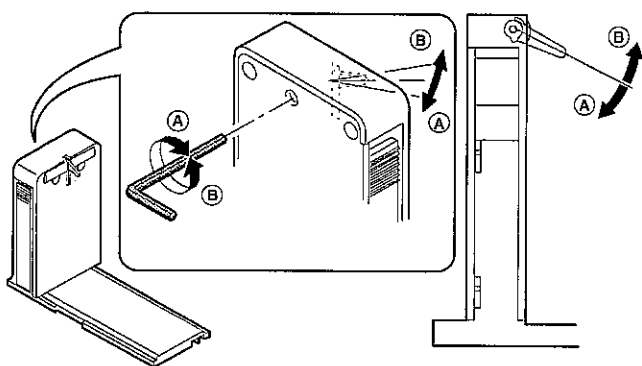
**(Duplex copy tray)**

- ① If the image is shifted from the reference in the direction of a, loosen two cup screw (M4) and turn the OC adjustment screw. Counterclockwise (in the arrow direction A).
- ② If the image is shifted from the reference in the direction of b, loosen two cup screws (M4) and turn the OC adjustment screw clockwise (in the arrow direction B). After adjustment, tighten the two cup screws (M4).

**(3) Tray height adjustment (Tray 2, 3 only)**

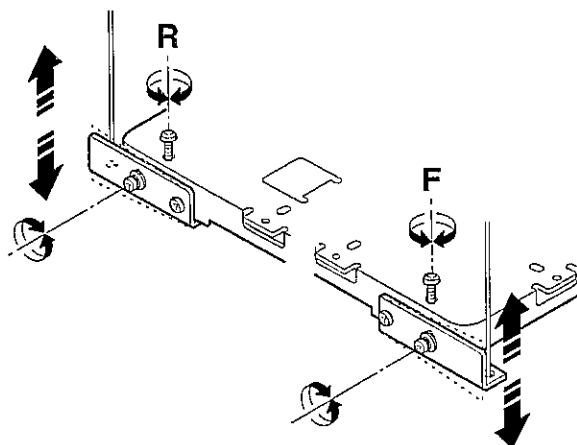
- ① Set one sheet of paper in the tray. When the tray is completely lifted, manually cancel the tray lock and pull out the tray.
- ② The paper lead edge at the paper feed side should be  $+2.0 \pm 0.5$  mm above the external tray frame.
- ③ Adjust the paper feed tray rising sensor (TUD2, TUD3) attached to the rear edge plate. (Check the sensor timing with simulation 6-3.)
  - Ⓐ When the paper lead edge is too high: Turn the set screw counterclockwise.
  - Ⓑ When the paper lead edge is too low: Turn the set screw clockwise.

(One rotation of the set screw adjusts about 1mm.)



#### (4) Tray parallelism adjustment (Tray 2, 3 only)

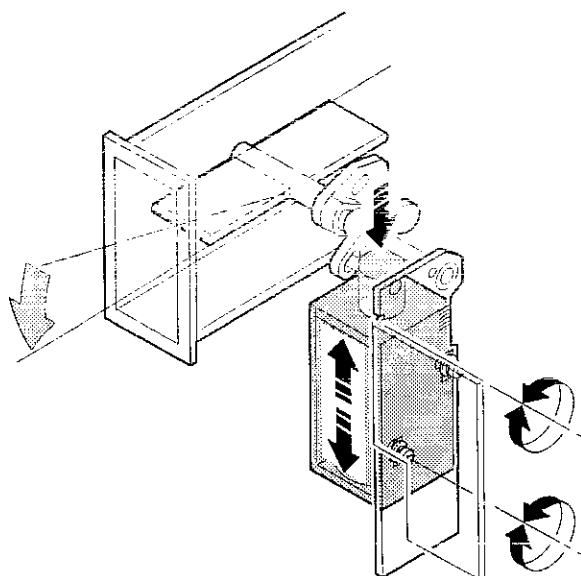
- ① Set a sheet of paper in a tray. When the tray is completely lifted, manually cancel the tray lock and remove the tray unit.
- ② If there is a difference of 0.5mm or more between the height of the front frame side and that the rear frame side, loosen the fixing screws (2 pcs.) and turn and adjust the adjustment screws (F/R).



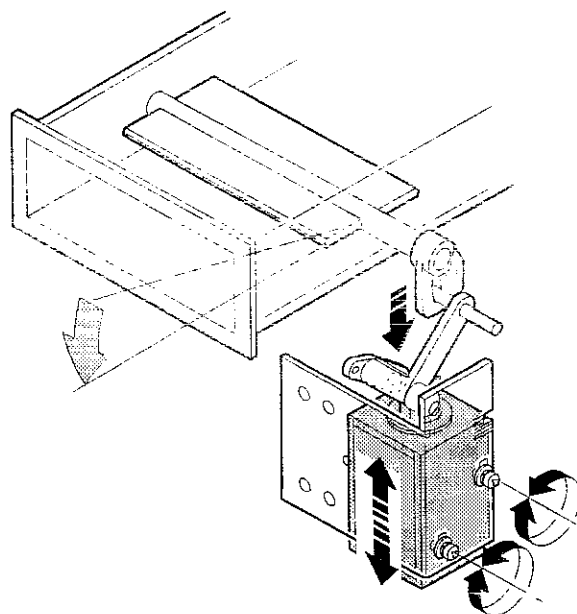
#### (5) Air paper feed duct solenoid height adjustment

The solenoid height adjustment is common to all air paper feed units.

- ① Loosen the two solenoid fixing screws.
- ② Push down the plunger manually.

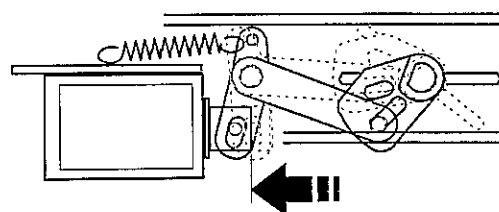
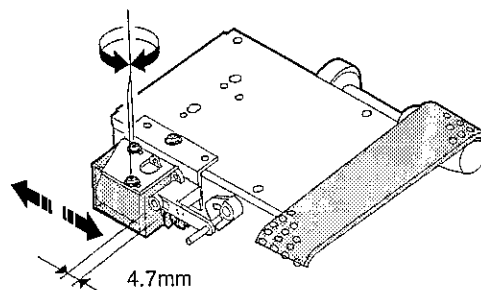


- ③ When the blowing or suction valve becomes horizontal (reaches the duct stopper) with the plunger depressed, fix the screws.  
 ※ If the solenoid is pushed down further from position B, the valve will be stopped by the stopper. This will apply an excessive force to the shaft and the bearing. Be careful of this. (Fix the solenoid at the point where the valve just makes contact with the stopper.)



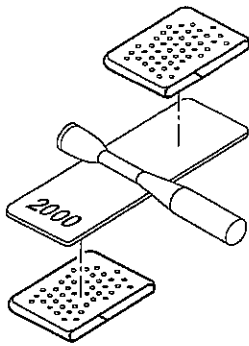
#### (Duplex paper feed tray suction duct solenoid)

- ① Loosen the two fixing screws of the suction duct solenoid.
- ② Press down the plunger manually.
- ③ Under the state of ②, tighten the fixing screws at the position where the suction valve opens completely. In that case, check that the solenoid plunger stroke is 4.7mm or less.

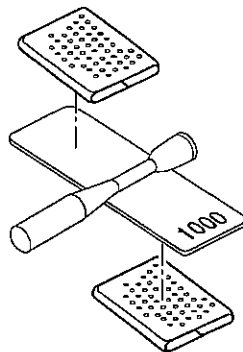


**(6) Note for air paper feed unit assembly****(Blowing valve unit)****① Valve cushion attachment position**

No.1 tray unit

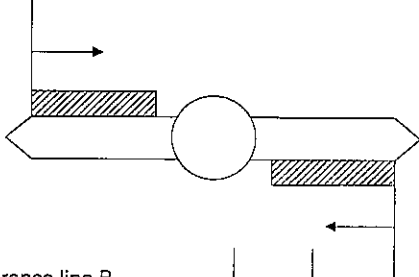


No.2\No.3 tray unit

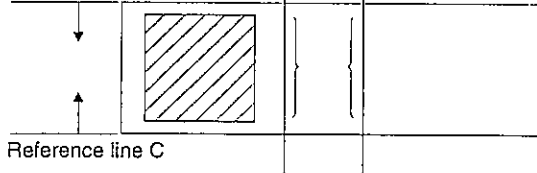


Marking (2000 or 1000) must be seen.

Reference line A



Reference line B

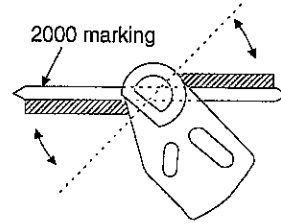


Reference line C

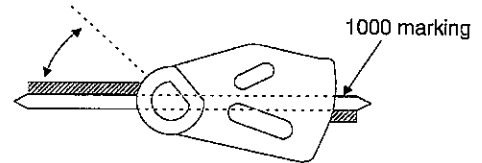
Must be 0.5 mm or less and no protrusion allowed.

**② Valve movable arm A attachment position**

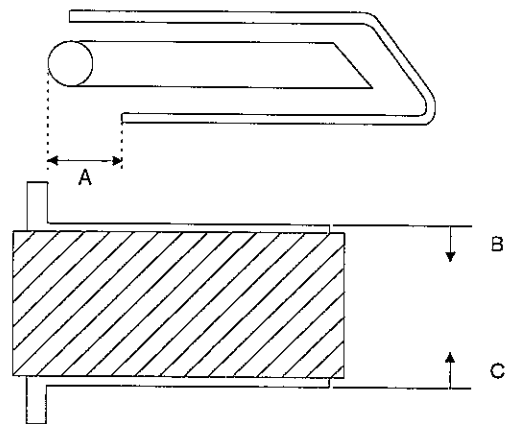
No.1 tray unit



No.2\No.3 tray unit



When the blowing valve is horizontal, the valve movable arm directions differ.

**(Suction duct unit)****① Relief valve cushion attachment position**

Reference A:  $7 \pm 2$  mm

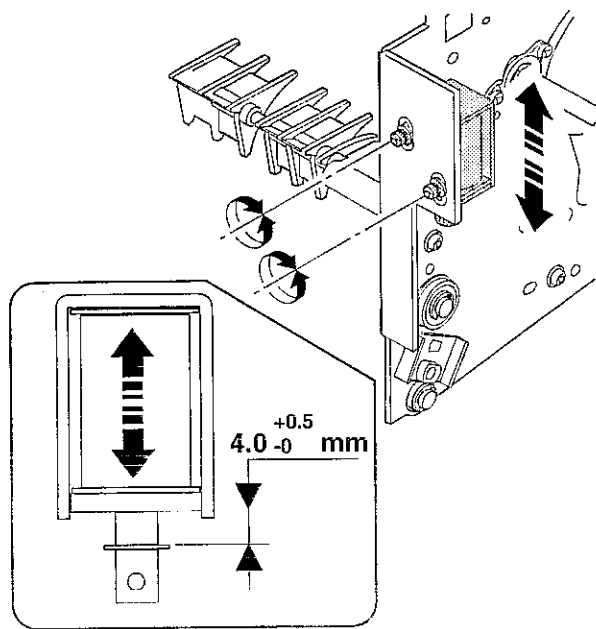
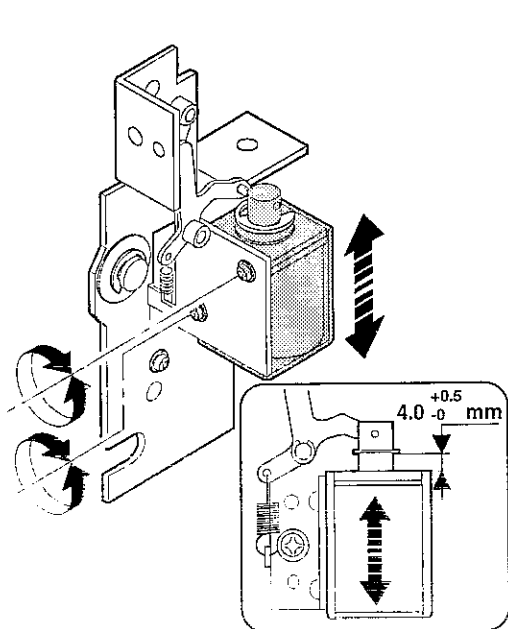
Reference B, C:  $0.5 \pm 0.5$  mm

Reference A, B, and C must be satisfied and no protrusion allowed.

## 6. Switchback (reverse) unit

### (1) Duplex copy reverse gate solenoid (DGS1, DGS2) position adjustment

- ① Adjust the solenoid fixing position so that the solenoid plunger stroke is  $4.0^{+0.5}_{-0}$  mm.
- ② Adjust the solenoid fixing position so that the reverse gate stop position is as shown below (when solenoid is ON).



Note: Adjust the stroke with the unit straight up.

## 7. Waste toner unit section

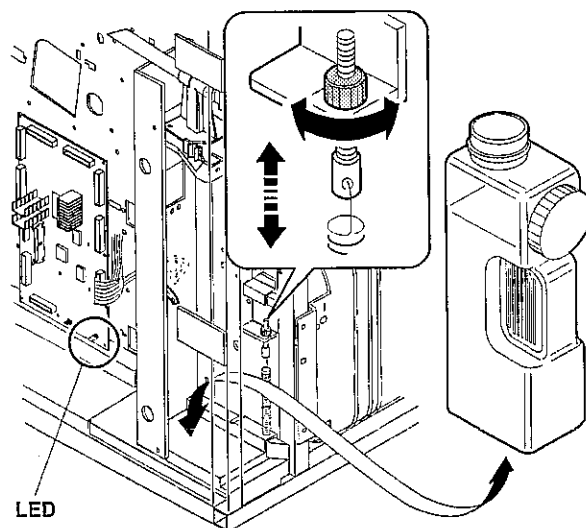
### (1) Waste toner bottle full sensor mounting position adjustment

The waste toner bottle full sensor (TNF) senses the waste toner bottle full.

When waste toner weight reaches about 1320 g, waste toner full is detected.

|                           |   |       |        |
|---------------------------|---|-------|--------|
| Waste toner bottle weight | : | about | 300 g  |
| Collected toner weight    | : | about | 1320 g |
| Full sense weight         | : | Total | 1620 g |

- ① When performing the waste toner bottle full sensor mounting position adjustment, prepare the waste toner bottle to the weight of about 1620 g.
- ② Open the waste toner cover.
- ③ Remove the currently set waste toner bottle, and put the waste toner bottle (about 1620 g) on the waste toner bottle holding plate.
- ④ The sensor senses when the LED on the main PWB is ON, and does not sense when the LED is OFF.  
For adjustment, turn the adjustment nut so that the LED turns on when the bottle (1620 g) is placed on the holding plate. Then under that state, turn the adjustment nut counterclockwise until the LED turns off. The adjustment is completed with the above.



## 8. Copy quality quality adjustment

### (1) The copy quality adjustment must be performed in the following cases.

- ① When the machine is installed.
- ② When maintenance is performed.
- ③ When the high voltage output is adjusted.
- ④ When the charger wire and its parts are replaced.
- ⑤ When the high voltage PWB unit is replaced.
- ⑥ When the copy lamp is replaced.
- ⑦ When the parts in the AC PWB are replaced.
- ⑧ When the optical system is adjusted, when its parts are replaced, or when the exposure adjustment plate is moved.
- ⑨ When the photoconductor drum is replaced or when the developer agent is replaced.
- ⑩ When the photoconductor is replaced.
- ⑪ When the developer agent is replaced.
- ⑫ When the main PWB is replaced.
- ⑬ When the AE sensor PWB/light quantity correction PWB is replaced.

### (2) Conditions required for the copy quality adjustment

- ① The optical system is free from dirt.
  - Table glass
  - Copy lamp/reflector
  - Mirrors (No. 1 ~ No. 6)
  - Lens
- ② The AE sensor must be free from dirt.
- ③ The dirt correction sensor must be free from dirt.
- ④ The white reference plate must be free from dirt.
- ⑤ The charger cases and wires must be free from dirt.
- ⑥ The lamps (BL/DL) must be free from dirt.
- ⑦ The high voltage outputs must be properly adjusted.

### (3) Process control

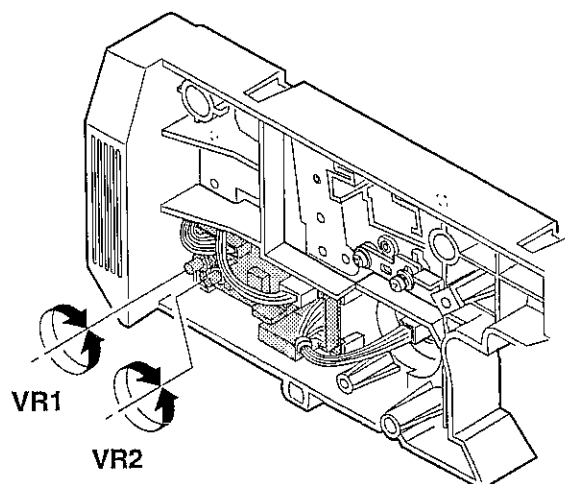
Perform the process control as stated below according to each state.

| Procedure |   |   |   |   |   |   | Conditions for process control                             | Remarks                         |
|-----------|---|---|---|---|---|---|------------------------------------------------------------|---------------------------------|
| 1         | 2 | 3 | 4 | 5 | 6 | 7 |                                                            |                                 |
| —         | — | ○ | ○ | ○ | ○ | ○ | A. When a new machine is installed.                        | "4" depends on the destination. |
| —         | ○ | ○ | — | ○ | ○ | ○ | B. When the developer is replaced.                         |                                 |
| —         | ○ | ○ | ○ | — | ○ | ○ | C. When the photoconductor is replaced.                    |                                 |
| —         | — | — | — | — | ○ | — | D. When the process control sensor is cleaned or replaced. |                                 |
| —         | — | — | — | — | ○ | — | E. When the marking sensor is cleaned or replaced.         |                                 |
| —         | ○ | ○ | — | — | — | ○ | F. When the dirt correction sensor is cleaned or replaced. |                                 |
| —         | ○ | ○ | — | — | — | ○ | G. When the AE sensor is cleaned or replaced.              |                                 |
| —         | ○ | ○ | — | — | — | ○ | H. When the optical system is cleaned.                     |                                 |
| —         | ○ | ○ | — | — | — | ○ | I. When the standard white plate is cleaned.               |                                 |
| ○         | ○ | ○ | — | — | — | ○ | J. When the high voltage output is adjusted.               |                                 |

#### <<Photoconductor drum temperature>>

The SD-2060 is equipped with the drum heater to stabilize the copy quality. When the power plug is connected to the power outlet, the drum reaches the stable temperature in about 15 minutes. Be sure to allow this time before the copy quality adjustment.

| Procedure | Item                                                                    | Sim. No.                                      | Contents                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |          |
|-----------|-------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------|
|           |                                                                         |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Japan               | EX       |
| 1         | Developer bias voltage/grid bias voltage/drum current adjustment        | 8-1<br>8-2<br>8-3<br>8-4<br>8-5<br>8-6<br>8-7 | Developing bias                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 200±10V             |          |
|           |                                                                         |                                               | MC (N)                                                                                                                                                                                                                                                                                                                                                                                                                                                              | -750±15V            | -750±15V |
|           |                                                                         |                                               | MC (P)                                                                                                                                                                                                                                                                                                                                                                                                                                                              | -590±15V            | -490±15V |
|           |                                                                         |                                               | MC (T/S)                                                                                                                                                                                                                                                                                                                                                                                                                                                            | -700±15V            | -645±15V |
|           |                                                                         |                                               | PTC                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | +15.0±5μA IF-Rl=5μA |          |
|           |                                                                         |                                               | TC                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | -55.0±5μA IF-Rl=7μA |          |
|           |                                                                         |                                               | SC<br>(DC element)                                                                                                                                                                                                                                                                                                                                                                                                                                                  | +320±20V            |          |
|           |                                                                         |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |          |
| 2         | AE (automatic exposure) adjustment level check and adjustment (User AE) | 20<br>(Key operation code)                    | Check that the AE adjustment level is at the standard level. If not, set to the standard level.                                                                                                                                                                                                                                                                                                                                                                     |                     |          |
| 3         | AE sensor gain control                                                  | 47                                            | The AE sensor gain is automatically adjusted.                                                                                                                                                                                                                                                                                                                                                                                                                       |                     |          |
| 4         | Drum membrane decrease counter and drum sensitivity setting             | 24-7<br>26-7                                  | The drum membrane decrease counter is reset.<br>The drum sensitivity is set.                                                                                                                                                                                                                                                                                                                                                                                        |                     |          |
| 5         | Developer filling<br>Developer adjustment                               | 25-2                                          | Toner density reference value is set.                                                                                                                                                                                                                                                                                                                                                                                                                               |                     |          |
| 6         | Drum marking/process control sensor output check and adjustment         | 44-7                                          | Drum marking sensor/process control sensor output check                                                                                                                                                                                                                                                                                                                                                                                                             |                     |          |
|           |                                                                         |                                               | • Drum marking sensor: (VR2)<br>• Process control sensor:<br>668 ~ 998 (VR1) see the figure below.                                                                                                                                                                                                                                                                                                                                                                  |                     |          |
|           |                                                                         | 44-2<br>44-3                                  | If the vale is outside the above range, adjust.                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |          |
| 7         | Copy quality adjustment                                                 | 46                                            | Follow the exposure adjustment procedure.<br>*Note:<br>When simulation 46 is performed, registration of the dirt correction reference and copy density adjustment are performed.<br>Therefore, be sure to clean the optical system before this adjustment. After the adjustment, check and adjust the copy quality in all modes.<br>If the simulation is terminated without checking and adjusting the copy quality, the process control will not operate properly. |                     |          |



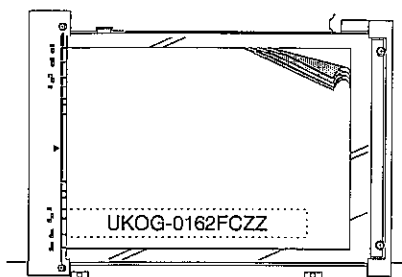
## Process control troubles and countermeasures

| Trouble code | Sub code           | Contents → M/C countermeasure                                                                                               | Cause                                                                                           | Service countermeasure                                                                             |
|--------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| F-2          | 31                 | Abnormal reflection rate on the photoconductor surface<br>→ Machine stop (Japan/SEC)<br>Low density copy (Others)           | 1. The image sensor is not adjusted.                                                            | Perform simulation 44-2.<br>(Adjustment value: $833 \pm 165$ )                                     |
|              |                    |                                                                                                                             | 2. Dirt on the image sensor                                                                     | • Wipe with soft cloth immersed in alcohol.                                                        |
|              |                    |                                                                                                                             | 3. Dirt on the drum surface (insufficient cleaning)                                             | • Check the cleaning blade and the photoconductor drum surface and replace them if necessary.      |
|              |                    |                                                                                                                             | 4. Defective image density sensor                                                               | • Replace the sensor.                                                                              |
|              |                    |                                                                                                                             | 5. Defective image density sensor PWB                                                           | • Replace the sensor PWB.                                                                          |
|              | 32                 | Defective detection of the drum marking<br>→ Machine stop (Japan/SEC)<br>→ Low density copy (Others)                        | 1. Defective drum (without marking)                                                             | Replace with the proper drum.                                                                      |
|              | 33 (Not displayed) | MC grid voltage limit over (Upper limit/lower limit)<br>→ Operate with the previous process control result.                 | 1. Defective drum heater                                                                        | Check the operation of the drum heater and replace it if necessary.                                |
|              |                    |                                                                                                                             | 2. Defective developer/developing agent<br>• Improper toner density<br>• Deteriorated developer | • Check the operation of the toner sensor and replace it if necessary.<br>• Replace the developer. |
|              |                    |                                                                                                                             | 3. Defective photo-sensitizer<br>• Deteriorated photo-sensitizer                                | • Replace the photo-sensitizer.                                                                    |
|              | 35 (Not displayed) | The toner patch reference value exceeds the measurement patch range.<br>→ Operate with the previous process control result. | Same as F-2 33.                                                                                 | Same as F-2 33.                                                                                    |
|              | 37                 | Defective adjustment of drum marking sensor gain<br>→ Machine stop (Japan/SEC)<br>→ Low density copy (Others)               | 1. The drum marking sensor is not adjusted.                                                     | • Perform simulation 44-3.<br>(Adjustment value: $178 \pm 55$ )                                    |
|              |                    |                                                                                                                             | 2. Dirt on the drum marking sensor                                                              | • Clean with soft cloth immersed in alcohol.                                                       |
|              |                    |                                                                                                                             | 3. Defective drum marking sensor                                                                | • Replace the sensor.                                                                              |
|              |                    |                                                                                                                             | 4. Defective drum marking sensor PWB                                                            | • Replace the PWB.                                                                                 |

## (4) Exposure adjustment procedure

Use test chart UKOG0162FCZZ for the exposure adjustment.

- ① Put four or five white papers (120mm × 340mm) on the glass table with the center reference. (Use clean, white paper and do not use recycled paper.) Put the test chart (UKOG0162FCZZ) in front of the paper.



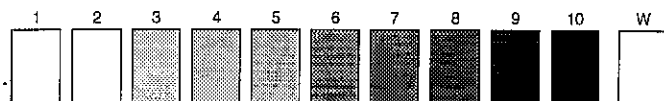
Test chart comparison table

| UKOG-0162FCZZ DENSITY No. | 1   | 2 | 3   | 4 | 5   | 6 | 7 | 8 | 9   | 10  | W |
|---------------------------|-----|---|-----|---|-----|---|---|---|-----|-----|---|
| UKOG-0089CSZZ DENSITY No. | 0.1 |   | 0.2 |   | 0.3 |   |   |   | 0.5 | 1.9 | 0 |
| KODAK GRAY SCALE          |     | 1 |     | 2 |     | 3 |   | 4 |     | 19  | A |

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- ② Manual exposure mode adjustment  
Perform simulation 46, and the following display will be given.

SIMULATION NO. 46  
INPUT (450 - 800): NORMAL MODE  
(TONER SAVE MODE: USE [→] KEY.)



EXPOSURE  
MANUAL  
COPIES SELECTED  
46  
COPIES MADE

Check that the exposure display cursor shows "1."

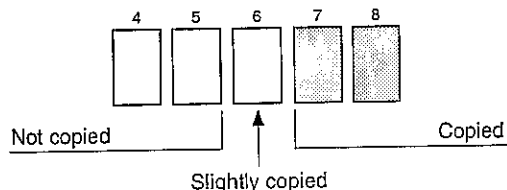
If not, set to "1" with  (LIGHT) key.

Make a copy.

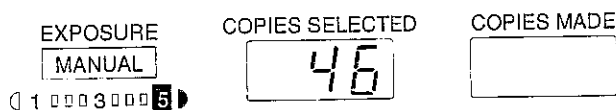
Check that "6" of UKOG-0162FCZZ is slightly copied and "5" is not copied. (In the case of UKOG-0089CSZZ, check that 0.5 is clearly copied and 03 is not copied.)

<When too light> Reduce the number displayed in the copied quantity display.

<When too dark> Increase the number displayed in the copied quantity display.



When the copy density is within the specified range, set to "5" with  (DARK) key.



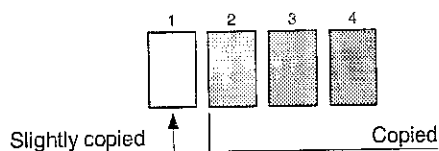
Check that the exposure display cursor shows "5."

Make a copy.

Check that "1" of UKOG-0162FCZZ is slightly copied and "W" is not copied. (In the case of UKOG-0089CSZZ, check that 0.1 is slightly copied and 03 or "0" is not copied.)

When too light Reduce the number displayed in the copied quantity display.

When too dark Increase the number displayed in the copied quantity display.

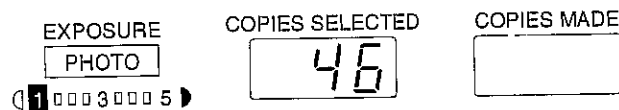


When the copy density is within the specified range, set to the photo mode with the exposure select key.

### ③ Photo mode adjustment

SIMULATION NO. 46

INPUT (450 - 800) NORMAL MODE  
(TONER SAVE MODE: USE [-] KEY.)



Check that the exposure display cursor shows "1."

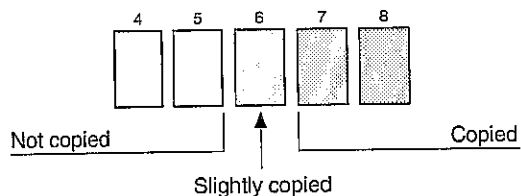
If not, set to "1" with  (LIGHT) key.

Make a copy.

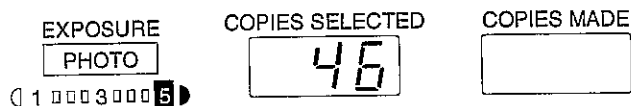
Check that "6" of UKOG-0162FCZZ is slightly copied and "5" is not copied. (In the case of UKOG-0089CSZZ, check that 0.5 is clearly copied and 03 is not copied.)

<When too light> Reduce the number displayed in the copied quantity display.

<When too dark> Increase the number displayed in the copied quantity display.



When the copy density is within the specified range, set to "5" with  (DARK) key.



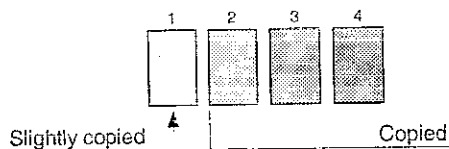
Check that the exposure display cursor shows "5."

Make a copy.

Check that "1" of UKOG-0162FCZZ is slightly copied and "W" is not copied. (In the case of UKOG-0089CSZZ, check that 0.1 is clearly copied and 03 or 0 is not copied.)

<When too light> Reduce the number displayed in the copied quantity display.

<When too dark> Increase the number displayed in the copied quantity display.

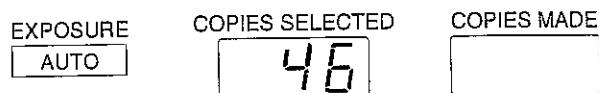


When the copy density is within the specified range, set to the automatic exposure mode with the exposure selection key.

### ④ Auto exposure mode adjustment

SIMULATION NO. 46

INPUT (450 - 800): AUTO MODE  
(TONER SAVE MODE: USE [-] KEY.)

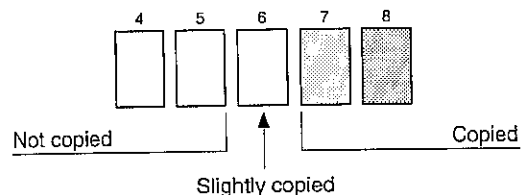


Make a copy.

Check that "3" of UKOG-0162FCZZ is slightly copied and "2" is not copied. (In the case of UKOG-0089CSZZ, check that 0.2 is clearly copied 0.1 is not copied.)

<When too light> Reduce the number displayed in the copied quantity display.

<When too dark> Increase the number displayed in the copied quantity display.



When the copy density is within the specified range, set to the manual exposure TSM mode with  key.

## ⑤ Manual exposure (TSM) mode adjustment

SIMULATION NO. 46

INPUT (450 - 800): TONER SAVE MODE  
(NORMAL MODE: USE [→] KEY.)

EXPOSURE

MANUAL

COPIES SELECTED

46A

COPIES MADE

① 1 000 3 000 5

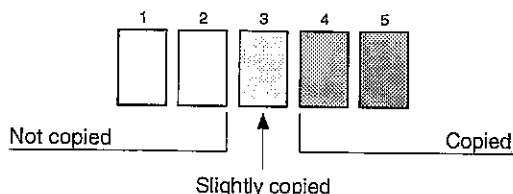
Check that the exposure display cursor shows "1."  
If not, set to "1" with [1] (LIGHT) key.

Make a copy.

Check that "6" of UKOG-0162FCZZ is slightly copied and "5" is not copied. (In the case of UKOG-0089CSZZ, check that 0.5 is clearly copied and 03 is not copied.)

When too light Reduce the number displayed in the copied quantity display.

When too dark Increase the number displayed in the copied quantity display.



When the copy density is within the specified range, set to "5" with [5] (DARK) key.

EXPOSURE

MANUAL

COPIES SELECTED

46A

COPIES MADE

① 1 000 3 000 5

Check that the exposure display cursor shows "5."

Make a copy.

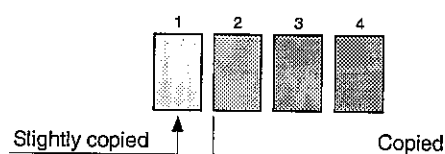
Check that "1" of UKOG-0162FCZZ is slightly copied and "W" is not copied. (In the case of UKOG-0089CSZZ, check that 0.5 is slightly copied and 03 and 0 ???? are not copied.)

&lt;When too light&gt;

Reduce the number displayed in the copied quantity display.

&lt;When too dark&gt;

Increase the number displayed in the copied quantity display.



When the copy density is within the specified range, set to the auto exposure (TSM) mode with the exposure selection key.

## ⑥ Auto exposure (TSM) mode adjustment

SIMULATION NO. 46

INPUT (450 - 800): TONER SAVE MODE  
(NORMAL MODE: USE [→] KEY.)

EXPOSURE

AUTO

COPIES SELECTED

46A

COPIES MADE

Make a copy.

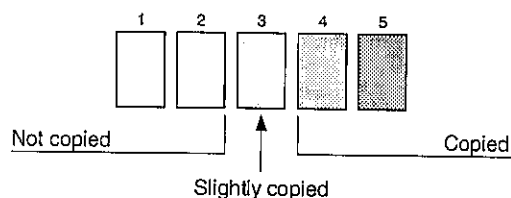
Check that "3" of UKOG-0162FCZZ is slightly copied and "2" is not copied. (In the case of UKOG-0089CSZZ, check that 0.2 is slightly copied and 0.1 is not copied.)

&lt;When too light&gt;

Reduce the number displayed in the copied quantity display.

&lt;When too dark&gt;

Increase the number displayed in the copied quantity display.



When the copy density is within the specified range, the picture quality adjustment is completed.

## (5) Exposure adjustment procedure

| Procedure | Adjustment item                     | Setting level | UKOG-0162FCZZ copy |                 |            |
|-----------|-------------------------------------|---------------|--------------------|-----------------|------------|
|           |                                     |               | Copied             | Slightly copied | Not copied |
| 1         | Sim 46 execution                    |               |                    |                 |            |
| 2         | Manual mode exposure adjustment     | EXP.N-1       | 7                  | 6               | 5          |
|           |                                     | EXP.N-5       | 2                  | 1               | W          |
| 3         | Photo mode exposure adjustment      | EXP.P-1       | 7                  | 6               | 5          |
|           |                                     | EXP.P-5       | 2                  | 1               | W          |
| 4         | N-AE mode exposure adjustment       | N-AE          | 4                  | 3               | 2          |
| 6         | Switch to the toner save mode       |               |                    |                 |            |
| 7         | Toner save mode exposure adjustment | EXP.T/S-1     | 7                  | 6               | 5          |
|           |                                     | EXP.T/S-5     | 2                  | 1               | W          |
| 8         | T/S-AE mode exposure adjustment     | T/S-AE        | 4                  | 3               | 2          |
| 9         | Completion of exposure adjustments  |               |                    |                 |            |

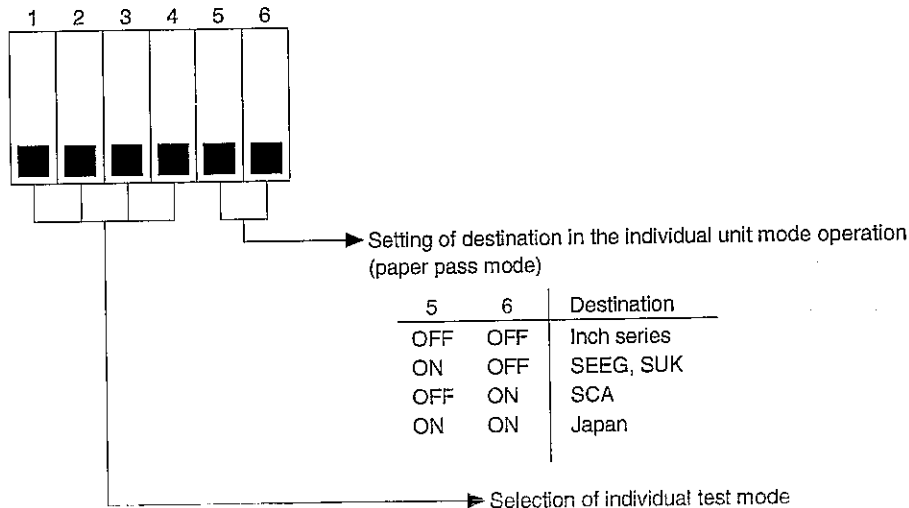
※ After execution of simulation 46, the machine enters the process control mode and the copy lamp lights up for several sec.

## 9. RADF UNIT SECTION (ELECTRICAL SECTION)

### (1) Individual unit test mode selection

#### 1. Individual unit test mode selection

To select the individual unit test mode, turn on the power switch while pressing the push switch. After entering the test mode, select the appropriate individual test mode by setting DIP switches 1 ~ 4 according to the table below. The selected individual test mode is effective only when the RADF cover is opened and closed



#### 2. Kind of individual unit test mode

|      | Mode to be set                                | 4   | 3   | 2   | 1   |
|------|-----------------------------------------------|-----|-----|-----|-----|
| (1)  | Single-sided paper normal pass mode           | OFF | OFF | OFF | OFF |
| (2)  | Duplex-sided paper pass mode                  | OFF | OFF | OFF | ON  |
| (3)  | Single-sided paper step pass mode             | OFF | OFF | ON  | OFF |
| (4)  | Individual unit check mode (Motor system)     | OFF | ON  | ON  | OFF |
| (5)  | Individual unit check mode (Solenoid, etc.)   | OFF | ON  | ON  | ON  |
| (6)  | Sensor adjustment mode                        | ON  | OFF | ON  | ON  |
| (7)  | EEPROM initializing mode                      | ON  | ON  | OFF | OFF |
| (8)  | Paper empty aging mode (single side)          | ON  | ON  | OFF | ON  |
| (9)  | Paper empty aging mode (duplex sides)         | ON  | ON  | ON  | OFF |
| (10) | Paper width sensor (DWL - RS) adjustment mode | ON  | ON  | ON  | ON  |

#### 3. Outline of each mode

- (1) Single-sided paper normal pass mode  
When originals are set on the original tray and the push button is pressed, the originals are fed until there are no originals on the tray or until the RADF cover is opened/closed.
- (2) Duplex-sided paper pass mode  
Originals are fed in duplex feed operation.  
(The details are the same as with the single-sided paper normal pass mode.)
- (3) Single-sided paper step pass mode  
Originals are fed in single-sided step paper feed mode.  
(The details are the same as the single-sided paper normal pass mode.)
- (4) Individual unit check mode (Motor system)  
The motor output is checked. With the push button, starting and stopping of the individual motors is repeated in the following sequence. When the RADF document cover is opened/closed, the operation is stopped. In this mode, no original must be placed on the original tray.  
 ※ Each operation will stop after approx. 1 min.
  - ① Document feed motor normal rotation (Separation section drive)
  - ② Document feed motor reverse rotation (Resist roller drive)
  - ③ Document transport motor normal rotation and paper feed motor reverse rotation (Synchronized control)
  - ④ Document transport motor reverse rotation
  - ⑤ Document exit motor high speed
  - ⑥ Document exit motor low speed

- (5) Individual unit check mode (Solenoid, etc.)  
The output of solenoid, etc. is checked.  
(The details are the same as the output check mode.)
  - ① Stopper solenoid absorption
  - ② Flapper solenoid absorption
  - ③ Electromagnetic brake ON
- (6) Sensor adjustment mode  
Check that there is no original in the resist sensor, the timing sensor, and the expulsion sensor section, push the push switch with the DF cover closed, and the sensor adjustment for each sensor will be performed.
- (7) EEPROM initializing mode  
EPROM is initialized. After clearing the data, initial values are written, if any.
- (8) Paper empty aging mode (single side)  
When the push switch is pushed, originals are replaced in single side feed in the timing of original size detected on the original tray with no original by the internal counter until the DF cover is opened/closed.  
(When the detection size on the original tray is LT portrait or smaller, step feed is performed. When the detection size is greater than LT portrait, normal feed is performed.) In this mode, no original must be passed.
- (9) Paper empty aging mode (duplex sides)  
With no original on the tray, originals are replaced in duplex feed.  
(The details are the same as the single-sided empty paper aging mode.)

## (2) Sensor level adjustment

### 1 General

The sensor level adjustment is largely divided into the sensor adjustment and the expulsion motor speed adjustment.  
(Each adjustment requires the DIP switch setting in the RADF PWB unit. For the dip switch setting, refer to "Individual test mode selection.")

### 2 Sensor adjustment

#### a) Various reflection sensors adjustment

- ① EEPROM initializing  
Set the DIP switch to the initializing mode, open/close the original cover, and push the push switch on the PWB.
- ② Sensor adjustment  
Set the DIP switch to the sensor adjustment mode, open/close the original cover, turn VR3 on the PWB so that the green LED on the display PWB lights up.

#### b) Paper width sensor

Set the DIP switch to the paper width sensor adjustment mode, open/close the RADF. Turn VR3 on the PWB to light the green LED on the display PWB.

### (3) Paper exit motor rotation speed adjustment

#### a) Low speed adjustment

Set the DIP switch to the individual unit check mode, open/close the original cover, click the push switch on the PWB a few times, and rotate the paper exit motor at a low speed. Turn VR1 so that the green LED on the display PWB lights up.

#### b) High speed adjustment

Set the DIP switch in the same manner as the high speed rotation. Click the push switch a few times, and turn VR2 which makes the paper exit motor rotate at a high speed so that the green LED on the display PWB lights up. Note that the low speed rotation adjustment must be performed before the high speed rotation adjustment.

### (4) RADF height adjustment

Remove the RADF cover before adjustment. Remove two screws in the back side of the RADF, and loosen seven screws around the RADF. Open the reverse cabinet and remove the RADF cover.

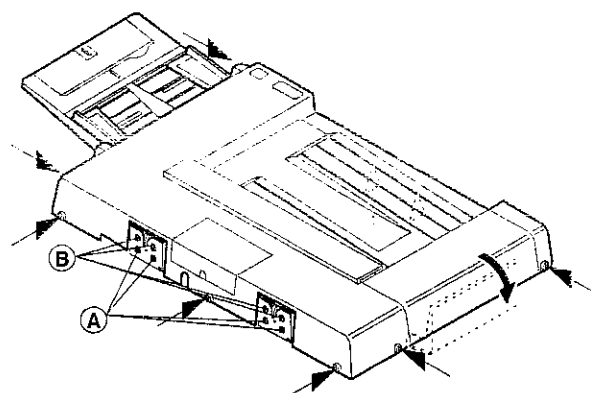
**Note:** Loosen the maintenance cover screw and remove the cover and remove the display panel connector in advance.

- (a) When the clearance between the DF spacer and the glass is 0.5 mm or more, loosen the hinge height position adjustment screw. (To decrease protrusion amount.) Then loosen screws (A) (B) fixing the hinge angle (total 8 pcs. of hinge angle and hinge fixing screws). With the RADF open, fix again.

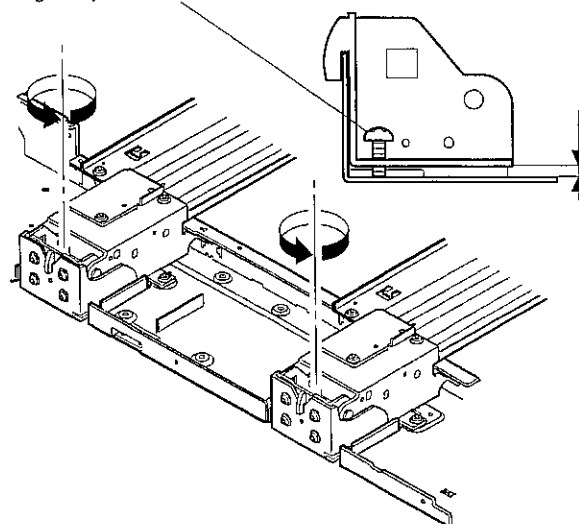
※ Until the adjustment is completed, it is better to remove the cover.

- (b) When the DF spacer makes contact with the glass before the RADF completely closes, perform similarly with (a) and loosen the height adjustment screw and attach the RADF again.
- (c) When the clearance between the DF spacer and the glass is 0.5 mm or more under the suction state of the magnet: Adjust the magnet catch so that the clearance is less than 0.5 mm.
- (d) When the magnet catch does not suck even if the clearance between the DF spacer and the glass is less than 0.5 mm: Adjust the magnet catch similarly to (c).

☆ After completion of the adjustment, attach the RADF cover. In this case, be careful to the positioning hole. (Insert the cover rib into the square hole.) Press from the above and tighten the screw. The reverse section cabinet must be open during adjustment. At the end, connect the connector.



Height adjustment screw (Contact screw)



## [7] MAINTENANCE (SD-2060)

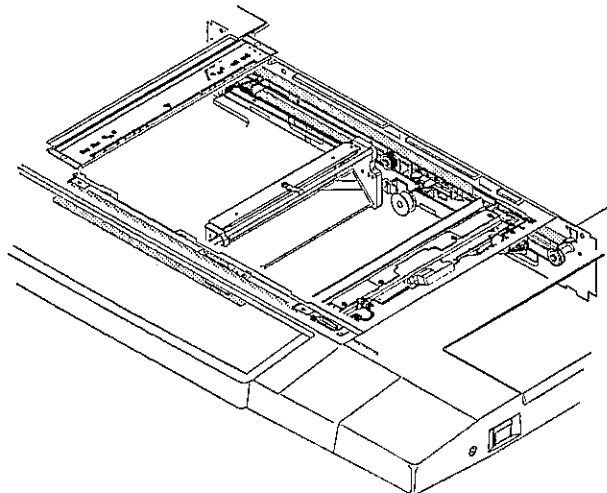
## 1. Timing

The maintenance of the SD-2060 should be performed every 125K copies.

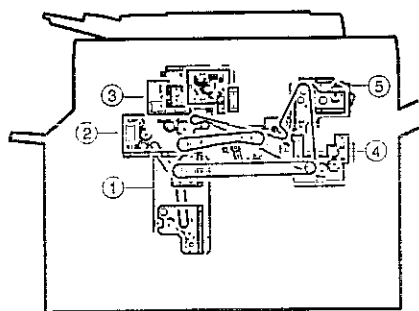
<Remarks> ★= lubrication, ○=cleaning, △=adjustment, ▲=replacement/mounting, □=repositioning,  
×=check (Perform cleaning, replacement, and adjustment as required.)

| Section           | Part                              | Timing       |              |      |      |      |      | Remark                       |
|-------------------|-----------------------------------|--------------|--------------|------|------|------|------|------------------------------|
|                   |                                   | Installation | Service call | 125K | 250K | 375K | 500K |                              |
| Developer         | Developer (Black) 2kg/250K        | ▲            |              |      | ▲    |      | ▲    | User refill                  |
|                   | Toner cartridge (Black) 930g      | ▲            |              |      |      |      |      |                              |
|                   | Developer seal                    |              |              | ○    | ○    | ○    | ▲    |                              |
|                   | DSD collar                        |              |              | ○    | ○    | ○    | ○    |                              |
|                   | Developer side seal F             |              |              | ○    | ▲    | ○    | ▲    |                              |
|                   | Developer side seal R             |              |              | ○    | ▲    | ○    | ▲    |                              |
| Drum              | Drum                              | (▲)          |              | ×    | ▲    | ×    | ▲    | User replacement every 125K. |
|                   | Blade                             |              |              | ▲    | ▲    | ▲    | ▲    |                              |
|                   | Toner receive seal                |              |              | ○    | ▲    | ○    | ▲    |                              |
|                   | CL side seal F/R                  |              |              | ○    | ▲    | ○    | ▲    |                              |
|                   | Drum separation pawl              |              |              | ○    | ▲    | ○    | ▲    |                              |
|                   | Charging plate unit (saw teeth)   |              |              | ○    | ▲    | ○    | ▲    |                              |
|                   | Screen grid                       |              | ○            | ○    | ▲    | ○    | ▲    |                              |
|                   | PTC wire                          |              | ○            | ○    | ▲    | ○    | ▲    |                              |
|                   | TC/SC wire                        |              | ○            | ○    | ▲    | ○    | ▲    |                              |
|                   | BL/DL lamp                        |              | ○            | ○    | ○    | ○    | ○    |                              |
|                   | Charger case                      |              |              | ○    | ○    | ○    | ○    |                              |
|                   | Density sensor (ID)               |              |              | ○    | ○    | ○    | ○    |                              |
|                   | Marking sensor (MD)               |              |              | ○    | ○    | ○    | ○    |                              |
|                   | Waste toner bottle                |              |              | ▲    | ▲    | ▲    | ▲    |                              |
| Suction           | Suction belt                      |              | ○            | ○    | ○    | ○    | ○    |                              |
|                   | Suction ozone filter              |              |              | ×    | ○    | ×    | ▲    |                              |
|                   | All filters                       |              |              | ×    | ○    | ×    | ▲    |                              |
| Fuser             | Upper heat roller                 |              |              | ×    | ▲    | ×    | ▲    | Roller ass'y                 |
|                   | Lower heat roller                 |              |              | ×    | ▲    | ×    | ▲    |                              |
|                   | Upper cleaning roller             | ▲            |              | ▲    | ▲    | ▲    | ▲    |                              |
|                   | Lower cleaning roller             | ▲            |              | ▲    | ▲    | ▲    | ▲    |                              |
|                   | Upper separation pawl             |              |              | □    | ▲    | □    | ▲    |                              |
|                   | Lower separation pawl             |              |              | □    | ▲    | □    | ▲    |                              |
|                   | Thermistor                        |              |              | ○    | ▲    | ○    | ▲    |                              |
|                   | Heat roller gear                  |              |              | ×    | ○    | ×    | ▲    |                              |
|                   | Curl belt                         |              |              | ○    | ○    | ○    | ○    |                              |
| Optical           | Mirror/lens/reflector/each sensor | ○            | ○            | ○    | ○    | ○    | ○    |                              |
|                   | Table glass/dust-proof filter     | ○            | ○            | ○    | ○    | ○    | ○    |                              |
|                   | Copy lamp                         |              |              |      | ×    |      | ×    |                              |
|                   | Optical rail                      |              |              | ×    | ★    | ×    | ★    |                              |
|                   | Drive wire/each pulleys           |              |              |      | ×    |      | ×    |                              |
| Duplex tray       | Paper feed belt                   |              | ○            | ○    | ○    | ○    | ○    |                              |
|                   | Transport rollers                 |              | ×            | ○    | ○    | ○    | ○    |                              |
|                   | Sensors                           |              | ×            |      | ×    |      | ×    |                              |
| Transport         | Resist roller                     |              | ○            | ○    | ○    | ○    | ○    |                              |
|                   | Transport rollers                 |              | ×            | ○    | ○    | ○    | ○    |                              |
|                   | Sensors                           |              | ×            |      | ×    |      | ×    |                              |
|                   | Paper guides                      |              | ×            |      | ○    |      | ○    |                              |
| Drive             | Gears                             |              |              |      | ★    |      | ★    |                              |
|                   | Belts                             |              |              |      | ×    |      | ×    |                              |
| Manual paper feed | Rollers                           |              | ○            | ○    | ▲    | ○    | ▲    |                              |
|                   | Torque limiter                    |              |              |      | ▲    |      | ▲    |                              |
| Air paper feed    | Paper feed belt                   |              | ○            | ○    | ○    | ○    | ○    |                              |
| Copy quality      |                                   | △            | ×            | ×    | △    | ×    | △    |                              |

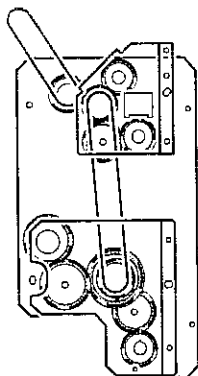
- ※ 1 Optical rail section  
Apply white grease to the shaded area.



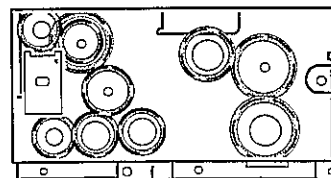
- ※ 2 Main body drive section  
Apply white grease to the shaded area.



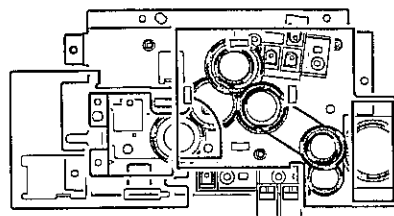
- ① Paper feed/transport drive section



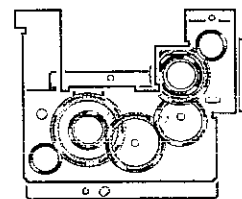
- ② Multi manual paper feed section



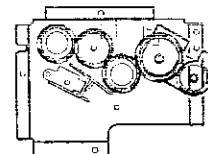
- ③ Drum drive section



- ④ Paper exit/reverse drive section

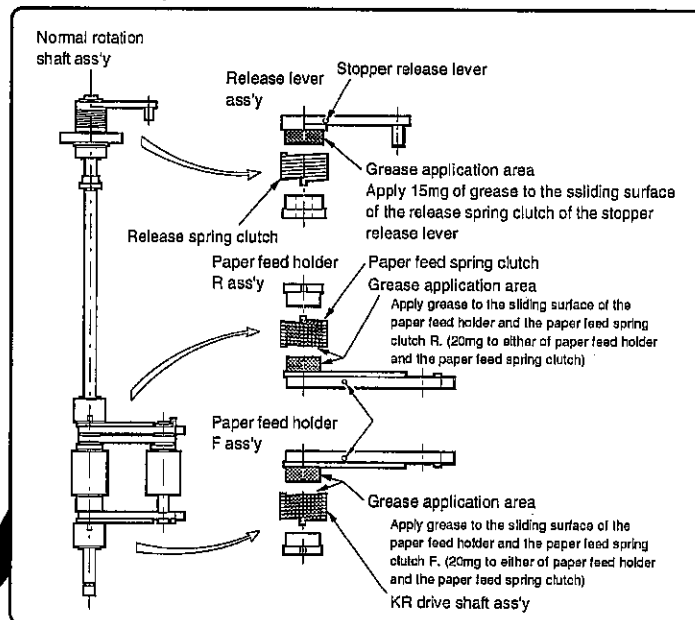


- ⑤ Fusing drive section

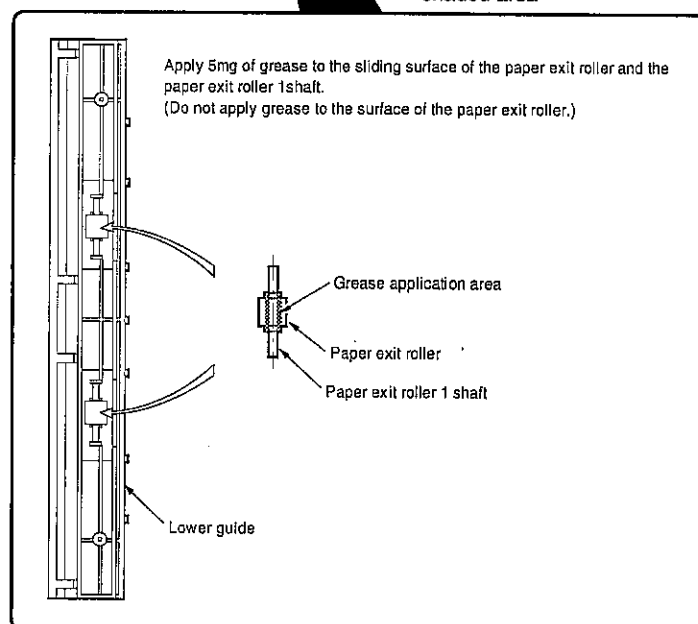
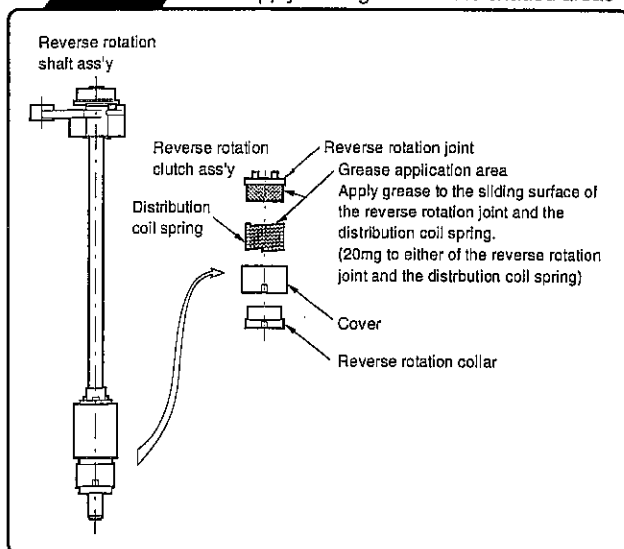
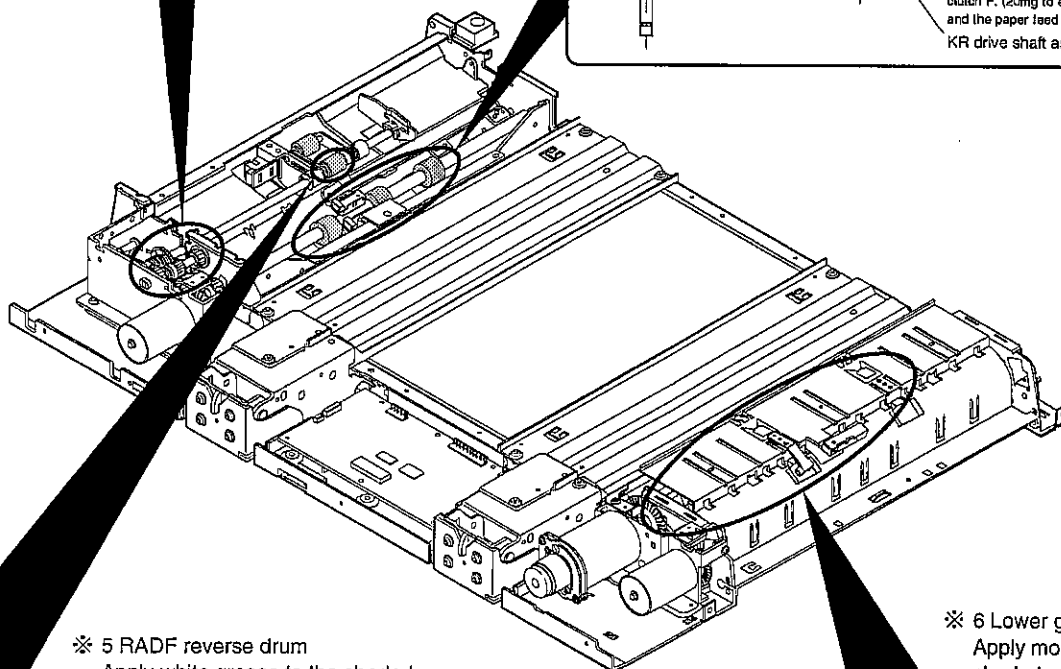
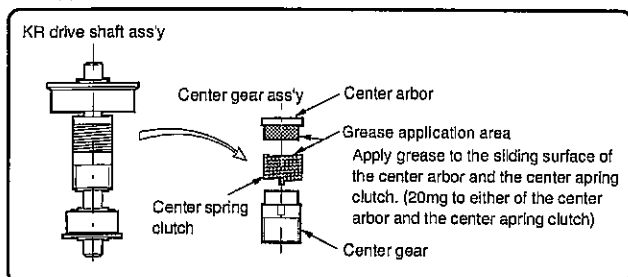


| Section | Part                       | Timing |     |     |      | Remark                                             |
|---------|----------------------------|--------|-----|-----|------|----------------------------------------------------|
|         |                            | 30K    | 60K | 90K | 100K |                                                    |
| RADF    | Feed roller                | ○      | ○   | ▲   |      | Clean with alcohol.                                |
|         | Take-up roller             | ○      | ○   | ▲   |      | Clean with alcohol.                                |
|         | Separation roller          | ○      | ○   | ▲   |      | Clean with alcohol.                                |
|         | Resist roller              | ○      | ○   | ○   |      | Clean with alcohol.                                |
|         | Paper exit roller          | ○      | ○   | ○   |      | Clean with alcohol.                                |
|         | Reverse rotation roller    | ○      | ○   | ○   |      | Clean with alcohol.                                |
|         | Resist sensor              | ○      | ○   | ○   |      | Air blow.                                          |
|         | Timing sensor              | ○      | ○   | ○   |      | Air blow.                                          |
|         | Reverse document sensor    | ○      | ○   | ○   |      |                                                    |
|         | Feed roller shaft          |        |     |     | ★    | @3: Use white grease. (Refer to the figure below.) |
|         | Center gear                |        |     |     | ★    | @4: Use white grease. (Refer to the figure below.) |
|         | Reverse rotation clutch    |        |     |     | ★    | @5: use white grease. (Refer to the figure below.) |
|         | Lower guide roller section |        |     |     | ★    | @5: Use Molycoat. (Refer to the figure below.)     |

※ 3 RADF rotation shaft  
Apply white grease to the shaded areas



※ 4 RADF center gear  
Apply white grease to the shaded areas

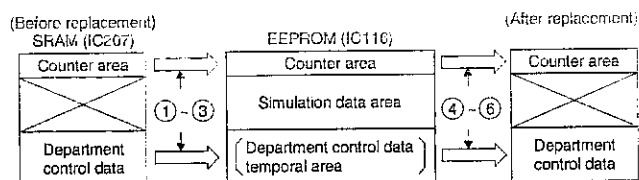


## 2. List of Service tools and grease

|    | Name                          | Parts code    | Price rank |
|----|-------------------------------|---------------|------------|
| 1  | Gray scale chart              | UKOG-0162FCZZ | FJ AT      |
| 2  | Test chart                    | UKOG-0089CSZZ | DP AF      |
| 3  | Digital tester                | UKOGE0043CS01 | YA CU      |
| 4  | Electrode harness             | DHAI-0304FCZZ | FP AV      |
| 5  | Electrode sheet               | UKOG-0110FCZZ | GD AY      |
| 6  | Air pressure meter            | UKOG-0178FCZZ | UC CB      |
| 7  | Air pressure measuring nozzle | UKOG-0179FCZZ | HB BE      |
| 8  | Thickness gauge               | UKOGM0075CSZZ | GN BB      |
| 9  | Grease                        | UKOG-0062FCZZ | FB AS      |
| 10 | White grease (50g)            | UKOG-0158FCZZ | FK AU      |
| 11 | Starting powder               | UKOG-0088CSZZ | FY AY      |
| 12 | Air brush                     | UKOG-0049CSZZ | GJ BD      |
| 13 | ADF belt cleaner              | UKOG-0188FCZZ | FX AX      |
| 14 | Cleaning paper                | UKOG-0213FCZZ | EQ AM      |

## 3. Main PWB replacement procedure

- Turn on the power of the SD-2060.
- Transfer the SRAM (IC27) data to the EEPROM (IC116).
- Turn off the power of the SD-2060, and remove the EEPROM (IC116).
- Replace the main PWB unit.  
In this case, attach the EEPROM (IC116) which was removed in step ③ to the new PWB unit.
- Turn on the power of the SD-2060.
- Transfer the SRAM (IC207) data from the EEPROM (IC116).



## 4. Backup battery replacement procedure

- Turn on the power of the SD-2060.
- Transfer the SRAM (IC207) data to the EEPROM (IC116).
- Turn off the power of the SD-2060.
- Remove the main PWB unit.
- Solder a new battery.
- Remove the old battery.
- Attach the main PWB unit.
- Turn on the power of the SD-2060.
- Return the SRAM (IC207) data from the EEPROM (IC116) to the SRAM (IC207).

## 5. Others (Paper size detection)

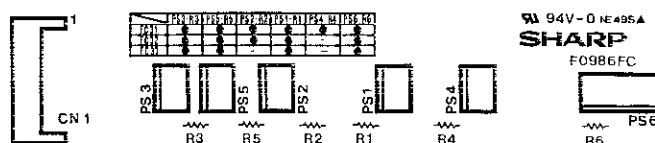
### A. Paper feed tray section

|            | Paper width detection |     |     |     |     | Paper length detection |
|------------|-----------------------|-----|-----|-----|-----|------------------------|
|            | PS1                   | PS2 | PS3 | PS4 | PS5 | PS6                    |
| A4         | —                     | —   | OFF | —   | —   | OFF                    |
| A3         | —                     | —   | OFF | —   | —   | —                      |
| B5         | —                     | OFF | —   | —   | —   | OFF                    |
| B4         | —                     | OFF | —   | —   | —   | —                      |
| A4R        | OFF                   | —   | —   | —   | —   | OFF                    |
| B5R        | —                     | —   | —   | OFF | —   | —                      |
| 11 × 8 1/2 | —                     | —   | —   | —   | OFF | OFF                    |
| 11 × 17    | —                     | —   | —   | —   | OFF | —                      |
| 8 1/2 × 11 | OFF                   | —   | —   | —   | —   | OFF                    |
| 8 1/2 × 13 | OFF                   | —   | —   | —   | —   | —                      |
| 8 1/2 × 14 | OFF                   | —   | —   | —   | —   | —                      |

OFF: The sensor is interrupted.

—: The sensor is ON.

| Destination  | R1/PS1 | R2/PS2 | R3/PS3 | R4/PS4 | R5/PS5 | R6/PS6 |
|--------------|--------|--------|--------|--------|--------|--------|
| Japan (FC31) | ○      | ○      | ○      | ○      | ○      | ○      |
| EXAB (FC32)  | ○      | ○      | ○      | —      | ○      | ○      |
| EXIN (FC33)  | ○      | —      | ○      | —      | ○      | ○      |

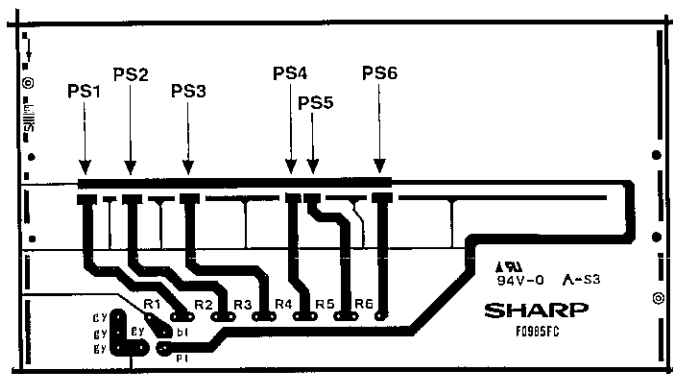


### B. Manual feed section

|               | Paper width detection |     |     |     |     |     | Paper length detection |       |
|---------------|-----------------------|-----|-----|-----|-----|-----|------------------------|-------|
|               | PS1                   | PS2 | PS3 | PS4 | PS5 | PS6 | MPSD1                  | MPSD2 |
| A4            | C                     | —   | —   | —   | —   | —   | OFF                    | OFF   |
| A3            | C                     | —   | —   | —   | —   | —   | ON                     | ON    |
| B5            | —                     | —   | C   | —   | —   | —   | OFF                    | OFF   |
| B4            | —                     | —   | C   | —   | —   | —   | ON                     | ON    |
| A5            | —                     | —   | —   | —   | C   | —   | OFF                    | OFF   |
| A4R           | —                     | —   | —   | —   | C   | —   | ON                     | OFF   |
| B5R           | —                     | —   | —   | —   | —   | C   | ON                     | OFF   |
| 11 × 8 1/2    | —                     | C   | —   | —   | —   | —   | OFF                    | OFF   |
| 11 × 17       | —                     | C   | —   | —   | —   | —   | ON                     | ON    |
| 8 1/2 × 5 1/2 | —                     | —   | —   | C   | —   | —   | OFF                    | OFF   |
| 8 1/2 × 11    | —                     | —   | —   | C   | —   | —   | ON                     | OFF   |
| 8 1/2 × 13    | —                     | —   | —   | C   | —   | —   | ON                     | ON    |
| 8 1/2 × 14    | —                     | —   | —   | C   | —   | —   | ON                     | ON    |

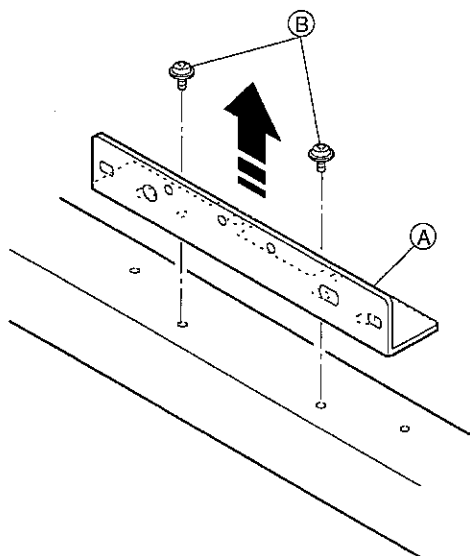
C: The PWB contact is closed.

—: The PWB contact is open

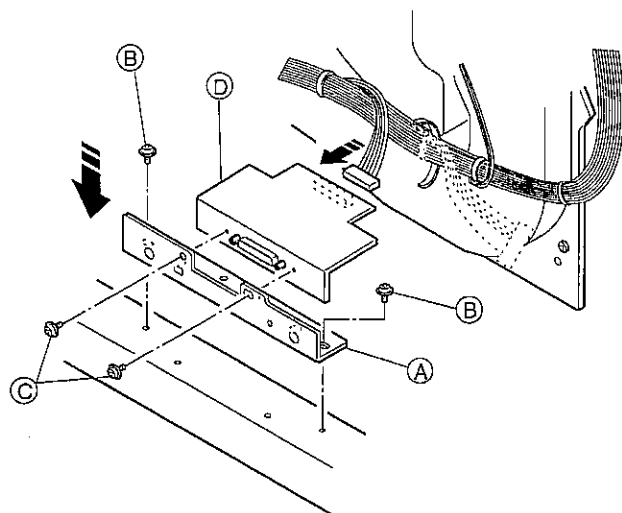


### C. RIC (Remote Interface Communication) PWB unit attachment

- ① Remove mounting angle **A** from the rear chassis of the body.  
(Remove two screws **B**.) Cut the band which is fixing the 15-pin connector.



- ② With two screws **C** (LX-BZ0527FCZZ, accessories to the RIC PWB unit), attach RIC PWB unit **D** to mounting angle **A**.  
③ Attach the mounting angle to the original position with two screws **B**.



## [8] Test commands and diagnostics

### 1. Test command

#### (1) Introduction

Test commands can be used for the following:

- To operate any functional block independently to check its function.
- To adjust the machine.
- To cancel troubles.
- To set up functions.

#### (2) Purpose

Test commands are used to help the technician in diagnosing and repairing the SD-2060.

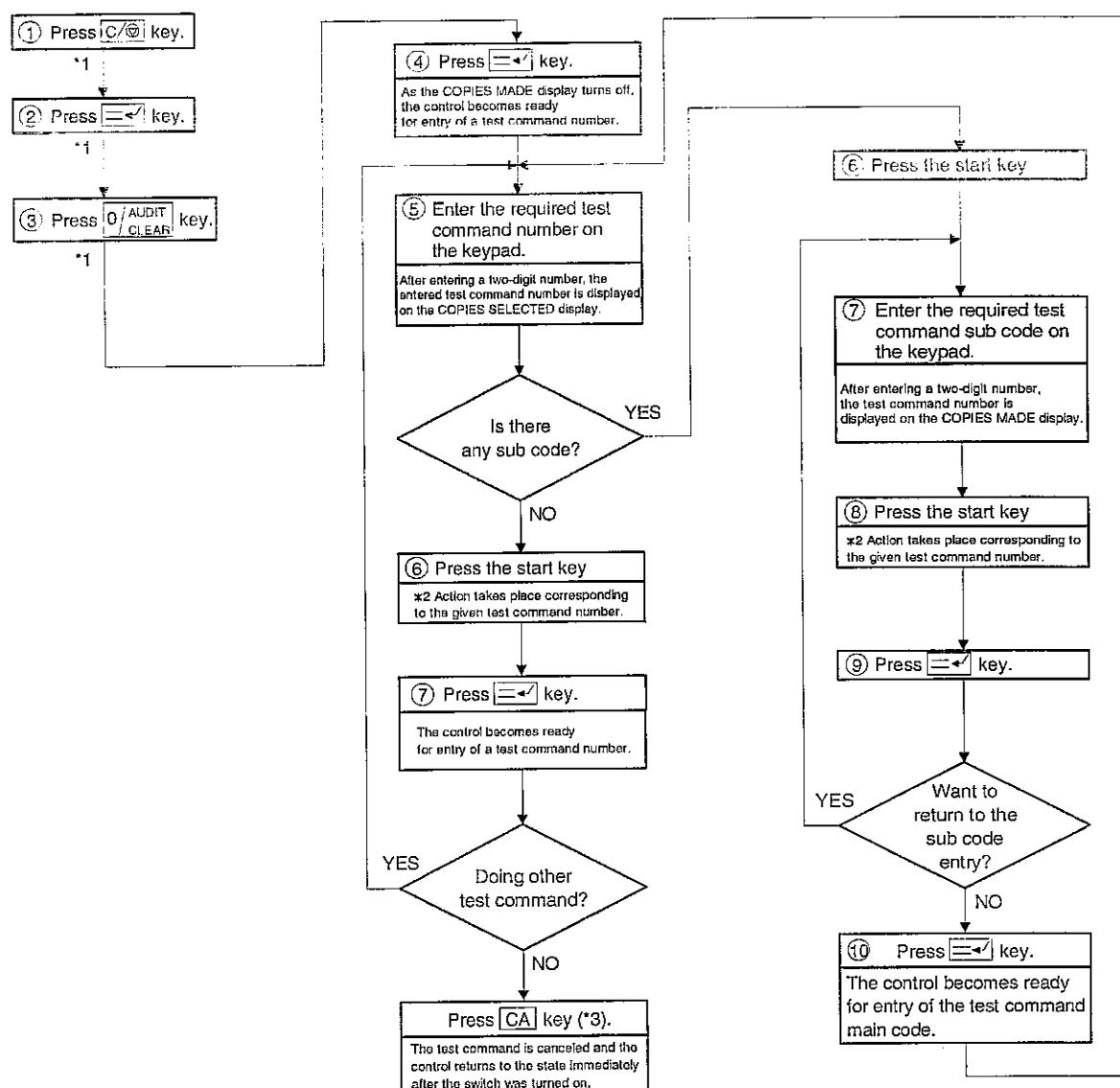
When the INTERRUPT key is pressed while a test command is being executed, the test command is interrupted and the machine becomes ready to accept entry of a test command number.

\*1: If the key was pressed for more than five seconds, it may not go into the test command mode.

\*2: Some test commands may require other works.

\*3: There are different canceling procedures of test commands as shown below: After canceling, the machine is in the power ON state.

- Test command 7  
One of the following operation cancels the test command execution.
  1. Power switch off.
  2. Press the CLEAR → INTERRUPT → 0 → INTERRUPT → CLEAR ALL keys.
- Test command 14  
Test command 14 is used to clear the contents of diagnostics (H2, H3, H4) which are stored in the memory LS1. After test command 14 has been executed, the diagnostic function automatically terminates.
- Other than test command 7  
The test command is canceled when the CLEAR ALL key is pressed.
- Special keys  
CLEAR ALL key: Test command mode → normal mode.  
INTERRUPT: Execution of test command is interrupted.  
(When the sub code is displayed, the machine returns to ⑦ in the case of ⑨, and returns to ⑤ in the case of ⑩.)  
CLEAR key: Clears the copy number window.
- The diagnostic code automatically terminates after the door switch operation "ON → OFF → ON", except "H2", "H3", "H4" and "U2" status codes.



**(3) Test command execution procedure****(4) Test command program list**

| Main code | Sub code | Operation                                                                        | Old Simulation No. |
|-----------|----------|----------------------------------------------------------------------------------|--------------------|
| 1         | 01       | Mirror scanning                                                                  | 1                  |
|           | 02       | Optical system sensor check                                                      | 2                  |
|           | 03       | Lens operation check                                                             | 26                 |
|           | 04       | Lens operation aging                                                             | 27                 |
| 2         | 01       | RADF operation aging                                                             | 31                 |
|           | 02       | RADF sensor check                                                                | 30                 |
|           | 03       | RADF individual load check                                                       | 115                |
| 3         | 01       | (NO PROGRAM)                                                                     |                    |
|           | 02       | Sorter sensor check                                                              | 61                 |
|           | 03       | Sorter individual load check                                                     | 113                |
| 5         | 01       | All lamps /LCD's ON                                                              | 5                  |
|           | 02       | Heater lamp check                                                                | 6                  |
|           | 03       | Copy lamp check                                                                  | 7                  |
|           | 04       | Discharge/BL check                                                               | 12                 |
| 6         | 01       | Transport system load operation (Clutch/solenoid)                                | 34                 |
|           | 02       | Paper feed fan motor operation (including solenoid)                              | 110                |
|           | 03       | Tray lift motor operation                                                        | 128                |
|           | 04       | (NO PROGRAM)                                                                     |                    |
| 7         | 01       | Aging with JAM                                                                   | 21                 |
|           | 02       | Aging without JAM                                                                | 22                 |
|           | 03       | Aging without JAM and fusing                                                     | 23                 |
|           | 04       | Warmup omission                                                                  | 24                 |
|           | 05       | Process operation check                                                          | 32                 |
|           | 06       | Intermittent aging                                                               | 90                 |
|           | 07       | Intermittent aging without JAM                                                   | 91                 |
| 8         | 01       | Developer bias output                                                            | 8                  |
|           | 02       | Main charger output (ME/AE)                                                      | 9                  |
|           | 03       | Main charger output (PHOTO)                                                      | 9                  |
|           | 04       | Main charger output (Toner save)                                                 | 9                  |
|           | 05       | Pre-transfer charger (PTC) output                                                | 11                 |
|           | 06       | Transfer charger output                                                          | 10                 |
|           | 07       | Separation charger output                                                        | 11                 |
| 10        |          | Toner motor ON                                                                   |                    |
| 13        |          | "U1" trouble reset                                                               | 13                 |
| 14        |          | Trouble reset (except for "U2" and tray trouble)                                 | 14                 |
| 15        |          | Tray trouble reset                                                               | 15                 |
| 16        |          | "U2" trouble reset                                                               |                    |
| 17        |          | "PF" trouble reset                                                               |                    |
| 20        |          | Maintenance counter clear                                                        | 20                 |
| 21        | 01       | Maintenance cycle setting                                                        | 62                 |
|           | 02       | (NO PROGRAM)                                                                     |                    |
| 22        | 01       | Each counter display (Total/maintenance/developer/RADF/stapler/Duplex/each tray) |                    |
|           | 02       | JAM counter display                                                              | 17                 |
|           | 03       | Error counter (trouble) display                                                  |                    |
|           | 04       | Key operation code display                                                       |                    |
|           | 05       | ROM version data display                                                         |                    |
| 23        | 01       | Each counter print (Total/maintenance/developer/RADF/stapler/Duplex/each tray)   | 100                |
|           | 02       | JAM counter print                                                                | 100                |
|           | 03       | Error counter (trouble) print                                                    |                    |
|           | 04       | Key operation code print                                                         | 100                |
|           | 05       | ROM version data print                                                           |                    |

| Main code | Sub code | Operation                                                                       | Old Simulation No. |
|-----------|----------|---------------------------------------------------------------------------------|--------------------|
| 24        | 01       | JAM counter clear                                                               | 15                 |
|           | 02       | Error (trouble) counter clear                                                   |                    |
|           | 03       | Duplex counter clear                                                            | 76                 |
|           | 04       | RADF counter clear                                                              | 75                 |
|           | 05       | Staple counter clear                                                            | 102                |
|           | 06       | Tray counter clear                                                              |                    |
|           | 07       | Membrane reduction correction counter clear                                     |                    |
| 25        | 01       | Toner density sensor monitoring                                                 | 25                 |
|           | 02       | Automatic developer adjustment                                                  | 25                 |
| 26        | 01       | Option setting                                                                  |                    |
|           | 02       | Tray 1 size setting                                                             |                    |
|           | 03       | Auditor mode setting (built-in/expansion/card counter/others)                   |                    |
|           | 04       | (NO PROGRAM)                                                                    |                    |
|           | 05       | Counter mode setting                                                            |                    |
|           | 06       | Destination setting                                                             |                    |
|           | 07       | Drum sensitivity setting                                                        | 179                |
|           | 08       | Tray paper empty data setting                                                   | 155                |
| 27        | 01       | Communication trouble (U7-00) setting                                           |                    |
|           | 02       | PC/Modem telephone number setting                                               |                    |
|           | 03       | PC/Modem ID # setting                                                           |                    |
|           | 04       | Service start/end                                                               |                    |
|           | 05       | Tag number setting                                                              |                    |
| 28        | 01       | Printer CG print                                                                |                    |
|           | 02       | Printer test print                                                              |                    |
|           | 03       | Key operator program set value print                                            |                    |
|           | 04       | Simulation set value print                                                      |                    |
| 30        | 01       | Main body sensor check (paper detection, duplex, fusing, waste toner detection) | 3                  |
|           | 02       | Tray sensor check                                                               | 4                  |
| 42        |          | Developer counter clear                                                         | 42                 |
| 43        |          | Fusing temperature setting                                                      |                    |
| 44        | 01       | Process control enable/disable setting                                          |                    |
|           | 02       | Drum marking sensor output adjustment                                           |                    |
|           | 03       | Process control sensor output adjustment                                        |                    |
|           | 04       | Process control reference value registration                                    |                    |
|           | 05       | (NO PROGRAM)                                                                    |                    |
|           | 06       | (NO PROGRAM)                                                                    |                    |
|           | 07       | Process ID/mark sensor LED intensity check                                      |                    |
|           | 08       | (NO PROGRAM)                                                                    |                    |
|           | 09       | Process control data display                                                    |                    |
| 46        |          | Exposure adjustment                                                             | 46                 |
| 47        |          | AE sensor characteristics measurement (AE sensor gain automatic adjustment)     | 47                 |

| Main code | Sub code | Operation                                                                                                                                                                                                                                                   | Old Simulation No. |
|-----------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 48        | 01       | Front/rear direction magnification ratio<br>• A: Focus correction (reduction)<br>• B: Zoom correction (1:1)<br>• C: Zoom correction (reduction)<br>• D: Focus correction (1:1)<br>• E: Focus correction (enlargement)<br>• F: Zoom correction (enlargement) | 48                 |
|           | 02       | Paper transport direction magnification ratio adjustment (mirror speed correction)                                                                                                                                                                          | 49                 |
|           | 03       | Lens characteristics input<br>• A: Focus correction value (reduction)<br>• B: Zoom correction value (1:1)<br>• C: Focus correction value (enlargement)                                                                                                      |                    |
|           | 04       | 4/5 mirror characteristics input<br>• A: Zoom correction value (reduction)<br>• B: Focus correction (1:1)<br>• C: Zoom correction value (enlargement)                                                                                                       |                    |
|           | 05       | Mirror speed correction value input                                                                                                                                                                                                                         |                    |
| 50        | 01       | Copy lead edge image loss void area adjustment                                                                                                                                                                                                              | 50                 |
|           | 02       | Lead edge adjustment (easy type)                                                                                                                                                                                                                            |                    |
|           | 03       | Lead edge adjustment value input                                                                                                                                                                                                                            |                    |
|           | 04       | Void amount adjustment value input                                                                                                                                                                                                                          |                    |
| 51        | 01       | Separation pawl timing adjustment                                                                                                                                                                                                                           | 53                 |
|           | 02       | Resist amount adjustment                                                                                                                                                                                                                                    |                    |
|           | 03       | Resist amount adjustment value input                                                                                                                                                                                                                        | 54                 |
|           | 04       | Brake clutch timer setting                                                                                                                                                                                                                                  |                    |
| 52        | 01       | Duplex alignment plate adjustment value setting                                                                                                                                                                                                             | 65                 |
|           | 02       | Duplex rear plate adjustment value setting                                                                                                                                                                                                                  | 65                 |
| 53        | 01       | RADF stop position adjustment value (normal paper, single) setting                                                                                                                                                                                          |                    |
|           | 02       | RADF stop position adjustment value (normal paper, duplex) setting                                                                                                                                                                                          |                    |
|           | 03       | RADF stop position adjustment value (thin paper, single) setting                                                                                                                                                                                            |                    |
|           | 04       | RADF stop position adjustment value (thin paper, duplex) setting                                                                                                                                                                                            |                    |
|           | 05       | RADF stop position adjustment value (normal paper, step feed) setting                                                                                                                                                                                       |                    |
|           | 06       | RADF stop position adjustment value (thin paper, step feed) setting                                                                                                                                                                                         |                    |
|           | 07       | RADF resist sensor adjustment                                                                                                                                                                                                                               |                    |
|           | 08       | RADF timing sensor adjustment                                                                                                                                                                                                                               |                    |
|           | 09       | RADF reverse sensor adjustment                                                                                                                                                                                                                              |                    |

## (5) Trouble code list

| Trouble code | Code kind                  | Sub code | Operation                                                                                                                                             |
|--------------|----------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| L1           | Mirror feed                | 00       | Mirror feed operation is not completed in the specified time.                                                                                         |
| L2           | Mirror motor system        | 00       | RRC operation trouble                                                                                                                                 |
| L3           | Mirror base return trouble | 00       | When initializing the mirror base, return operation is not completed in the specified time from completion of feeding in copying.                     |
| L4           | Main motor system          | 01       | Drum motor lock (the process system)                                                                                                                  |
|              |                            | 02       | Main motor lock (the transport system)                                                                                                                |
|              |                            | 21       | Vacuum motor lock (the paper suction system)                                                                                                          |
|              |                            | 22       | Blower motor lock (the paper blowing system)                                                                                                          |
| L5           | Lens motor system          | 00       | Lens operation complete between master and mirror                                                                                                     |
|              |                            | 02       | Lens shift operation is not completed in the specified time after starting initialization.                                                            |
|              |                            | 04       | 4/5 mirror home position sense trouble                                                                                                                |
|              |                            | 05       | Lens stepping motor trouble                                                                                                                           |
|              |                            | 01       | No full wave signal                                                                                                                                   |
| L8           | AE trouble                 | 02       | Greater than full wave signal width                                                                                                                   |
|              |                            | 03       | AE sensor output abnormality (No change)                                                                                                              |
| H2           | Fusing                     | 00       | Thermistor open detection                                                                                                                             |
| H3           | Fusing                     | 00       | Heat roller abnormally high temperature detection                                                                                                     |
| H4           | Fusing                     | 00       | Low temperature detection when the upper heat roller does not reach the specified temperature in the specified time after turning on the power relay. |
| U0           |                            | 00       | Master-slave communication control trouble (Master judgement)                                                                                         |
| U1           | Battery                    | 01       | Backup memory battery 1 low battery                                                                                                                   |
|              |                            | 02       | Backup memory battery 2 low battery                                                                                                                   |
|              |                            | 03       | Backup memory batteries 1/2 low battery                                                                                                               |
| U2           | Memory                     | 01       | Counter sum check error                                                                                                                               |

| Trouble code | Code kind                 | Sub code | Operation                                                                     |
|--------------|---------------------------|----------|-------------------------------------------------------------------------------|
| U3           | Mirror motor system       | 00       | Communication control trouble between the mirror controller and the main body |
|              |                           | 20       | Mirror motor drive abnormality detection                                      |
|              |                           | 21       | Mirror home position 1 detection abnormality                                  |
|              |                           | 23       | Mirror base process control initialization abnormality                        |
|              |                           | 26       | Mirror motor power voltage drop                                               |
|              |                           | 40       | The lens home position sensor does not sense the slide base position.         |
|              |                           | 41       | In LHP origin correction, there is a shift greater than allowable step.       |
| U4           | Duplex tray trouble       | 02       | Duplex alignment plate home position sense trouble                            |
|              |                           | 03       | Duplex rear plate home position sense trouble                                 |
| U5           | RADF                      | 00       | Transmission control trouble between RADF and the main body                   |
|              |                           | 01       | Resist sensor trouble                                                         |
|              |                           | 02       | Reverse sensor trouble                                                        |
|              |                           | 03       | Timing sensor trouble                                                         |
|              |                           | 11       | RADF motor trouble. motor M1/A (DFM)                                          |
|              |                           | 12       | RADF motor trouble. motor M2/B (DTM)                                          |
|              |                           | 13       | RADF motor trouble. motor M3/C (DEM)                                          |
| U7           | PC/Modem system           | 00       | Communication trouble between PC/Modem and PPC                                |
| U8           | Expansion memory system   | 00       | Defective installation of the expansion memory PWB                            |
|              |                           | 01       | Incomplete initializing of the expansion memory                               |
| C1           | Charging charger system   | 00       | High voltage output trouble                                                   |
| C2           | Transfer charger system   | 00       | High voltage output trouble                                                   |
| C3           | Separation charger system | 00       | High voltage output trouble                                                   |
| F1           | Sorter                    | 00       | Communication trouble between main PWB and finisher                           |
|              |                           | 02       | Finisher drive (transport) motor trouble                                      |
|              |                           | 03       | Guide bar oscillation motor trouble                                           |
|              |                           | 06       | Shift motor trouble                                                           |
|              |                           | 08       | Staple shift motor trouble                                                    |
|              |                           | 10       | Staple unit operation trouble                                                 |

| Trouble code | Code kind                   | Sub code | Operation                                                                      |
|--------------|-----------------------------|----------|--------------------------------------------------------------------------------|
| F2           | Process system              | 00       | Toner density sensor output value abnormality                                  |
|              |                             | 31       | Photoconductor surface reflection ratio abnormality                            |
|              |                             | 32       | Drum marking read trouble                                                      |
|              |                             | 33       | The grid voltage exceeds the upper limit or falls below the lower limit.       |
|              |                             | 36       | In the second patch measurement mode, the measured value is outside the range. |
|              |                             | 37       | Drum marking sensor gain adjustment trouble                                    |
| F3           | Tray 1 trouble              | 11       | PT disc trouble                                                                |
|              |                             | 12       | Rising trouble                                                                 |
|              |                             | 13       | Falling trouble                                                                |
| F3           | Tray 2 trouble              | 21       | PT disc trouble                                                                |
|              |                             | 22       | Rising trouble                                                                 |
|              |                             | 23       | Falling trouble                                                                |
| F3           | Tray 3 trouble              | 31       | PT disc trouble                                                                |
|              |                             | 32       | Rising trouble                                                                 |
|              |                             | 33       | Falling trouble                                                                |
| EE           | Auto development adjustment | EU       | Sensor level input abnormality (Undertone)                                     |
|              |                             | EL       | Sensor level input abnormality (Overtone)                                      |

#### (6) Non-trouble code list

| Code       | Code kind           | Operation                                                                                 |
|------------|---------------------|-------------------------------------------------------------------------------------------|
| CH         | Door open           | The door switch is not turned on. (Steady light)                                          |
| CH (Blink) | DV unit uninstalled | The DV unit is not installed. The DV unit connector is not connected properly. (Blinking) |
| PC         | Card counter        | In the machine with the card counter, the counter is not installed.                       |
| —          | Auditor             | In the machine with the auditor, it is in the NOT READY state.                            |
| PF         | PC/Modem            | In the machine with PC/Modem, the copy inhibit command is received from the host.         |

## (7) Details of the test commands

| Main code | Sub code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Ref. page |
|-----------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 1         |          | When main code number "1" is entered, the following LCD screen is displayed.<br><div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> SIMULATION NO.1<br/> INPUT 1-4<br/> 1.OPTICAL SYSTEM SCAN.<br/> 2.OPTICAL SYSTEM SENSOR TEST.<br/> 3.LENS TEST<br/> 4.LENS AGING TEST </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |
|           | 01       | When the start lamp is on, the magnification ratio can be selected with the zoom key.<br>When the start key is turned on, scanning is performed in the selected magnification ratio.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |
|           | 02       | When sub code "2" is entered, the following LCD screen is displayed to allow checking of the operations of the optical system sensors.<br><div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> SIMULATION NO. 1-2<br/> LHP, MBHP, RE, MHP, DC38V </div> <p style="text-align: center;">(Note) During detection: Highlighted.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |
|           | 03       | The lens moves to the fixed magnification ratios. When all the magnification ratios are cycled, the operation is terminated.<br>During execution, the lens moves to its fixed magnification ratios, and the magnification ratio is displayed on the magnification ratio display. When the lens is in transit or in halt, one of the following messages is displayed.<br>(Fixed magnification ratio)<br><div style="display: flex; justify-content: space-between; align-items: flex-start; margin-top: 10px;"> <div style="width: 60%;"> <p>(START)</p> <p>AB series: 100% → 50% → 70% → 81% → 86% → 115% ← 122% ← 141% ← 200% ←</p> <p>(START)</p> <p>Inch series: 100% → 50% → 64% → 77% → 95% → 121% ← 129% ← 141% ← 200% ←</p> </div> <div style="width: 35%;"> <p>{In transit}</p> <p>SIMULATION NO.1-3<br/>ONE LENS CARRIAGE<br/>CYCLE<br/>Moving</p> <p>{In halt}</p> <p>SIMULATION NO.1-3<br/>ONE LENS CARRIAGE<br/>CYCLE<br/>Stopped</p> </div> </div> |           |
|           | 04       | The operation of SIMULATION No. 1-3 is continued until interrupted, and the following messages are displayed.<br><div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> {In transit}<br/> SIMULATION NO.1-4<br/> LENS PRESET<br/> Moving </div> <div style="text-align: center;"> {In halt}<br/> SIMULATION NO.1-4<br/> LENS PRESET<br/> Preset stop ... </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |
| 2         |          | When main code number "2" is entered, the following LCD screen is displayed.<br><div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> SIMULATION NO. 2<br/> INPUT 1-3<br/> 1.RADF AGING TEST.<br/> 2.RADF SENSOR TEST.<br/> 3.RADF COMPONENT OPERATION TEST. </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |
|           | 01       | During execution, the basic screen and the following message are displayed.<br>SIMULATION NO.2-1<br>1. 1 → 1 (1 → 2)<br>1. 2 → 1 (2 → 2)<br>When 1 or 2 is selected and START key is pressed, the RADF performs aging without originals set in the machine.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |

| Main code | Sub code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Ref. page |
|-----------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | 02       | <p>When sub code "2" is entered, the following LCD screen is displayed, allowing to check the operations of the sensors.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> SIMULATION NO.2-2<br/> DSD, DRS, DTS, RDD, AUOD<br/> TGOD, DWS, DLS1, DLS2, DWD1<br/> DWD2, DWD3, DWD4, DWD5 </div> <div style="display: flex; justify-content: space-between;"> <div> DSD : Original set sensor<br/> DRS : Original resist sensor<br/> DTS : Original timing sensor<br/> RDD : Original exit reverse sensor<br/> AUOD : ADF open/close switch<br/> TGOD : Reverse guide open/close switch<br/> DWS : Original wide sensor<br/> (Light reception, light emission) </div> <div> DLS1 : Original length sensor 1<br/> DLS2 : Original length sensor 2<br/> DWD1 : Original wide sensor<br/> DWD2 : Original wide sensor<br/> DWD3 : Original wide sensor<br/> DWD4 : Original wide sensor<br/> DWD5 : Original wide sensor </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |
|           | 03       | <p>The LCD screen allows checking of load operations of RADF.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> SIMULATION NO.2-3<br/> 1.A-MOTOR FORWARD. }<br/> 2.A-MOTOR REVERSE. } PAPER FEED SECTION<br/> 3.B-MOTOR FORWARD. }<br/> 4.B-MOTOR REVERSE. } TRANSPORT SECTION<br/> 5.C-MOTOR HIGH-SPEED. }<br/> 6.C-MOTOR LOW-SPEED. } REVERSE SECTION<br/> 7.BRAKE CLUTCH.<br/> 8.DOCUMENT STOPPER SOLENOID.<br/> 9.FLAPPER SOLENOID.* </div> <ul style="list-style-type: none"> <li>• During the test command operation, the motor keeps rotating.</li> <li>The clutch and the solenoids operate only once.</li> <li>* FLAPPER (GATE)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |
| 3         |          | <p>When main code "3" is entered, the following LCD screen is displayed.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> SIMULATION NO.3<br/> INPUT 1-3<br/> 1.(NO PROGRAM)<br/> 2.SORTER SENSOR TEST.<br/> 3.SORTER COMPONENT OPERATION TEST. </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |
|           | 01       | (NO PROGRAM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |
|           | 02       | <p>When sub code "2" is entered, the following LCD screen is displayed, allowing checking the operations of the sorter sensors.</p> <p>(STAPLER SORTER) When the SF-S53 is connected. (SORTER) When the SF-S16 is connected.</p> <div style="display: flex; justify-content: space-between; margin: 10px 0;"> <div style="border: 1px solid black; padding: 5px; width: 45%;"> SIMULATION NO.3-2<br/> STAPLER SORTER<br/> JSW, BHPS, LCHPS, SGHPS, SPID<br/> SPPD, BPED<br/> SCSW, SHPS, SCS, SSD, SED<br/> SPED </div> <div style="border: 1px solid black; padding: 5px; width: 45%;"> SIMULATION NO.3-2<br/> SORTER<br/> SPID, SPOD, IULD, ILLD, IHPS<br/> IPSS<br/> SJOD, STCD, SBCD </div> </div> <div style="display: flex; justify-content: space-between;"> <div> &lt;SF-S53&gt;<br/> JSW : Joint switch<br/> BHPS : Bin home position sensor<br/> LCHPS : Lead cam home position sensor<br/> SGHPS : Stapler guide bar home position sensor<br/> SPID : Sorter paper entry sensor<br/> SPPD : Sorter paper presence sensor<br/> BPED : Bin paper sensor </div> <div> SCSW : Staple cover open/close sensor<br/> SHPS : Staple home position sensor<br/> SCS : Staple unit oscillation sensor<br/> SSD : Staple sensor<br/> SPED : Sorter paper exit sensor </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div> &lt;SF-S16&gt;<br/> SPID : Sorter paper entry sensor<br/> SPOD : Sorter paper exit sensor<br/> IULD : Indexer upper limit sensor<br/> ILLD : Indexer lower limit sensor<br/> IHPS : Indexer home position sensor </div> <div> IPSS : Indexer home position sensor<br/> SJOD : Sorter joint sensor<br/> STCD : Sorter upper cabinet switch<br/> SBCD : Sorter front cabinet switch </div> </div> |           |
|           | 03       | <p>When sub code "3" is entered, the following LCD screen is displayed, allowing checking of sorter load operations.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |

| Main code | Sub code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Ref. page |
|-----------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 3         | 03       | <div>(STAPLE SORTER) when the SF-S53 is connected: (SORTER) when the SF-S16 is connected:</div> <div><div><div>1.MAIN MOTOR.<br/>2.PAPER PASS SOLENOID.<br/>3.PAPER HOLD SOLENOID.<br/>4.BINSHIFT MOTOR.<br/>5.JOGGER MOTOR<br/>6.STAPLE MOTOR.</div><div><div>SIMULATION NO.3-3<br/>1.MAIN MOTOR.<br/>2.FAN MOTOR.<br/>3.GATE SOLENOID<br/>4.INDEX SOLENOID.</div></div></div><div><div>• During the test command operation, the motor keeps rotating.<br/>The solenoids operate only once.</div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |
| 5         |          | <div>When main code "5" is entered, the following LCD screen is displayed.</div> <div><div><div>SIMULATION NO.5<br/>INPUT 1-4<br/>1.ALL LED/LCD ON.<br/>2.HEATER LAMP TEST.<br/>3.COPY LAMP TEST.<br/>4.DL/BL TEST.</div></div></div> <div><div><div>01The ON state of LED/LCD can be checked by selecting options on the LCD screen.</div><div>02The heater lamp repeats ON/OFF for 10 times each in 0.5sec cycle.</div><div>03The copy lamp lights up for 20 sec in the set exposure level.<br/>When the copy lamp is on, the "fuser ventilation fan motor (+10V driven)", the "optical system cooling fan motors 1, 2", the "process cooling fan motor (+10V driven) are activated. The exposure is initially set to the manual mode. The copy lamp light quantity is changed according to change in the exposure level. The mode can be switched to the photo mode to allow lighting the lamp.</div><div>04The LEDs of the blank lamp light up from the rear frame side sequentially. After lighting for one second they turn off from the rear frame side sequentially. This operation is repeated twice.<br/>During this operation, the discharge lamp is also lit.</div></div></div>                                                                                                                                                                                                                                                                                        |           |
| 6         |          | <div>When main code "6" is entered, the following LCD screen is displayed.</div> <div><div><div>SIMULATION NO 6<br/>INPUT 1-4<br/>1.COPIER SOLENOID/CLUTCH OPERATION<br/>2.BLOWER MOTOR OPERATION TEST.<br/>3.PAPER TRAY OPERATION TEST.<br/>4.(NO PROGRAM)</div></div></div> <div><div><div>01During execution, the following LCD screen is displayed, allowing selection of load operation checks.</div><div><div><div>SIMULATION NO.6<br/>SELECT COPIER SOLENOID/CLUTCH.<br/>1.PSPS    2.DGS1    3.DGS2    4.<br/>5.HRS    6.MPFS    7.MPFC    8.TBC1<br/>9.TBC2    10.TBC3    11.DBC    12.TRC1<br/>13.TRC2    14.DTRC    15.    16.DFSS<br/>17.PSBRK</div><div><div>1. PSPS : Separation solenoid<br/>2. DGS1 : Discharge/reverse switch solenoid<br/>3. DGS2 : Duplex copy/reverse solenoid<br/>4. (Blank) : (However, the main motor rotates.)<br/>5. HRS : Fuser drive solenoid<br/>6. MPFS : Manual paper feed solenoid<br/>7. MPFC : Manual paper feed clutch<br/>8. TBC1 : Paper feed belt clutch 1<br/>9. TBC2 : Paper feed belt clutch 2<br/>10. TBC3 : Paper feed belt clutch 3<br/>11. DBC : Duplex copy Paper feed belt clutch<br/>12. TRC1 : Paper transport roller clutch 1<br/>13. TRC2 : Paper transport roller clutch 2<br/>14. DTRC : Duplex copy transport clutch<br/>15. (Blank) : (However, the main motor rotates.)<br/>16. DFSS : Duplex copy lead edge stopper solenoid<br/>17. PSBRK : Resist roller brake clutch</div></div></div></div></div></div> |           |

| Main code                    | Sub code                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Ref. page |                         |      |                        |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
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| 6                            | 02                      | <p>When sub code "2" is entered, the following LCD screen is displayed, allowing checking of blower motor operation.</p> <div><p>SIMULATION NO. 6-2</p><p>1. TRAY1 (TVVS1, TBVS1, TVFM, TBFM)</p><p>2. TRAY2 (TVVS2, TBVS2, TVFM, TBFM)</p><p>3. TRAY3 (TVVS3, TBVS3, TVFM, TBFM)</p><p>4. DUPLEX (DVVS, DBVS, TVFM, TBFM)</p><p>5. FAN ONLY (TVFM, TBFM)</p><p>SELECT NUMBER (1-5)</p></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |                         |      |                        |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
|                              | 03                      | <p>The operation of each tray is checked.</p> <p>During execution, the tray is initialized and the following screen is displayed.</p> <p>(The tray is stopped by detection of the upper limit except when there is no paper in the tray.)</p> <div><p>SIMULATION NO. 6-3</p><p>NET:MPED,MPSD1,MPSD2</p><table><tr><td>TRAY1:</td><td>TCD1, TLD1, TUD1, TPTD1</td></tr><tr><td>TSW1</td><td></td></tr><tr><td>TRAY2:</td><td>TCD2, TLD2, TUD2, TPTD2</td></tr><tr><td>TSW2, PS21, PS22, PS23, PS24</td><td></td></tr><tr><td>PS25, PS26</td><td></td></tr><tr><td>TRAY3:</td><td>TCD3, TLD3, TUD3, TPTD3</td></tr><tr><td>TSW3, PS31, PS32, PS33, PS34</td><td></td></tr><tr><td>PS35, PS36</td><td></td></tr></table><p>&lt;TRAY 1&gt;</p><p>TCD1 : Paper feed tray set sensor 1</p><p>TLD1 : Paper feed tray lower limit sensor 1</p><p>TUD1 : Paper feed tray rising sensor 1</p><p>TLMD1 : Paper feed tray upper limit sensor 1</p><p>TPTD1 : Paper feed tray PT sensor 1</p><p>TSW1 : Paper feed tray switch 1</p><p>&lt;TRAY 2&gt;</p><p>TCD2 : Paper feed tray set sensor 2</p><p>TLD2 : Paper feed tray lower limit sensor 2</p><p>TUD2 : Paper feed tray rising sensor 2</p><p>TLMD2 : Paper feed tray upper limit sensor 2</p><p>TPTD2 : Paper feed tray TP sensor 2</p><p>TSW2 : Paper feed tray switch 2</p><p>&lt;TRAY 3&gt;</p><p>TCD3 : Paper feed tray set sensor 2</p><p>TLD3 : Paper feed tray lower limit sensor 3</p><p>TUD3 : Paper feed tray rising sensor 3</p><p>TLMD3 : Paper feed tray upper limit sensor 3</p><p>TPTD3 : Paper feed tray PT sensor 3</p><p>TSW3 : Paper feed tray switch 3</p><table><tr><th></th><th colspan="5">Paper width detection</th><th>Paper length detection</th></tr><tr><th></th><th>PS1</th><th>PS2</th><th>PS3</th><th>PS4</th><th>PS5</th><th>PS6</th></tr><tr><td>A4</td><td>—</td><td>—</td><td>OFF</td><td>—</td><td>—</td><td>OFF</td></tr><tr><td>A3</td><td>—</td><td>—</td><td>OFF</td><td>—</td><td>—</td><td>—</td></tr><tr><td>B5</td><td>—</td><td>OFF</td><td>—</td><td>—</td><td>—</td><td>OFF</td></tr><tr><td>B4</td><td>—</td><td>OFF</td><td>—</td><td>—</td><td>—</td><td>—</td></tr><tr><td>A4R</td><td>OFF</td><td>—</td><td>—</td><td>—</td><td>—</td><td>OFF</td></tr><tr><td>B5R</td><td>—</td><td>—</td><td>—</td><td>OFF</td><td>—</td><td>OFF</td></tr><tr><td>11 × 8½</td><td>—</td><td>—</td><td>—</td><td>—</td><td>OFF</td><td>OFF</td></tr><tr><td>11 × 17</td><td>—</td><td>—</td><td>—</td><td>—</td><td>OFF</td><td>—</td></tr><tr><td>8½ × 11</td><td>OFF</td><td>—</td><td>—</td><td>—</td><td>—</td><td>OFF</td></tr><tr><td>8½ × 13</td><td>OFF</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td></tr><tr><td>8½ × 14</td><td>OFF</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td></tr></table><p>OFF: The sensor is interrupted.</p><p>—: The sensor is ON.</p></div> | TRAY1:    | TCD1, TLD1, TUD1, TPTD1 | TSW1 |                        | TRAY2: | TCD2, TLD2, TUD2, TPTD2 | TSW2, PS21, PS22, PS23, PS24 |  | PS25, PS26 |  | TRAY3: | TCD3, TLD3, TUD3, TPTD3 | TSW3, PS31, PS32, PS33, PS34 |  | PS35, PS36 |  |  | Paper width detection |  |  |  |  | Paper length detection |  | PS1 | PS2 | PS3 | PS4 | PS5 | PS6 | A4 | — | — | OFF | — | — | OFF | A3 | — | — | OFF | — | — | — | B5 | — | OFF | — | — | — | OFF | B4 | — | OFF | — | — | — | — | A4R | OFF | — | — | — | — | OFF | B5R | — | — | — | OFF | — | OFF | 11 × 8½ | — | — | — | — | OFF | OFF | 11 × 17 | — | — | — | — | OFF | — | 8½ × 11 | OFF | — | — | — | — | OFF | 8½ × 13 | OFF | — | — | — | — | — | 8½ × 14 | OFF | — | — | — | — | — |
| TRAY1:                       | TCD1, TLD1, TUD1, TPTD1 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |                         |      |                        |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| TSW1                         |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |                         |      |                        |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| TRAY2:                       | TCD2, TLD2, TUD2, TPTD2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |                         |      |                        |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| TSW2, PS21, PS22, PS23, PS24 |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |                         |      |                        |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| PS25, PS26                   |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |                         |      |                        |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| TRAY3:                       | TCD3, TLD3, TUD3, TPTD3 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |                         |      |                        |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| TSW3, PS31, PS32, PS33, PS34 |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |                         |      |                        |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| PS35, PS36                   |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |                         |      |                        |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
|                              | Paper width detection   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |                         |      | Paper length detection |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
|                              | PS1                     | PS2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | PS3       | PS4                     | PS5  | PS6                    |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| A4                           | —                       | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | OFF       | —                       | —    | OFF                    |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| A3                           | —                       | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | OFF       | —                       | —    | —                      |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| B5                           | —                       | OFF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | —         | —                       | —    | OFF                    |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| B4                           | —                       | OFF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | —         | —                       | —    | —                      |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| A4R                          | OFF                     | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | —         | —                       | —    | OFF                    |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| B5R                          | —                       | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | —         | OFF                     | —    | OFF                    |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| 11 × 8½                      | —                       | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | —         | —                       | OFF  | OFF                    |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| 11 × 17                      | —                       | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | —         | —                       | OFF  | —                      |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| 8½ × 11                      | OFF                     | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | —         | —                       | —    | OFF                    |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| 8½ × 13                      | OFF                     | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | —         | —                       | —    | —                      |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| 8½ × 14                      | OFF                     | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | —         | —                       | —    | —                      |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
|                              | 04                      | (NO PROGRAM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |                         |      |                        |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |
| 7                            |                         | <p>When main code "7" is entered, the following LCD screen is displayed.</p> <div><p>SIMULATION NO. 7</p><p>INPUT 1-7</p><p>1. COPIER AGING TEST MODE.</p><p>2. COPIER AGING TEST; MISFEED DETECTION DISABLED.</p><p>3. COPIER AGING TEST MISFEED DETECTION, WARM UP, TEMPERATURE CONTROL DISABLED.</p><p>4. WARM UP DISABLED.</p><p>5. PROCESS UNIT OPERATION TEST.</p><p>6. INTERVAL AGING MODE.</p><p>7. INTERVAL AGING MODE.(NO MISFEED DETECTION)</p></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |                         |      |                        |        |                         |                              |  |            |  |        |                         |                              |  |            |  |  |                       |  |  |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |     |   |     |         |   |   |   |   |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |

| Main code | Sub code                                                                                                                                                                                                                                                                                                                                                                                             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                     | Ref. page |
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| 7         | 01                                                                                                                                                                                                                                                                                                                                                                                                   | During execution, the basic screen and the following message are displayed, allowing aging.<br>WARM UP TIME: --:--<br>WARMING UP, PLEASE WAIT                                                                                                                                                                                                                                                                                                   |           |
|           | 02                                                                                                                                                                                                                                                                                                                                                                                                   | Copier aging test without paper can be made with misfeed detection disabled.<br>During execution, the basic screen and the following message are displayed.<br>WARM UP TIME: --:--<br>WARMING UP, PLEASE WAIT                                                                                                                                                                                                                                   |           |
|           | 03                                                                                                                                                                                                                                                                                                                                                                                                   | Copier aging test can be performed with misfeed detection, warm up, and temperature control disabled. (The heater lamp does not light up.)                                                                                                                                                                                                                                                                                                      |           |
|           | 04                                                                                                                                                                                                                                                                                                                                                                                                   | The operation check can be performed with warmup disabled.                                                                                                                                                                                                                                                                                                                                                                                      |           |
|           | 05                                                                                                                                                                                                                                                                                                                                                                                                   | All the process operations are checked.                                                                                                                                                                                                                                                                                                                                                                                                         |           |
|           | 06                                                                                                                                                                                                                                                                                                                                                                                                   | Ready wait is set between 1 - 900 sec, and aging is performed.<br>During execution, the basic screen and the following message are displayed. When a number value of 1sec - 900 sec is entered, the set time is displayed in the COPIES MADE display. Pressing the START key brings the machine into the warmup mode. When the start lamp is on, aging is performed for the set time.<br>SIMULATION NO.7-6<br>INPUT INTERVAL TIME<br>(1~900SEC) |           |
|           | 07                                                                                                                                                                                                                                                                                                                                                                                                   | Similar to SIMULATION NO.7-6, ready wait time can be set, and aging without misfeed detection is performed.                                                                                                                                                                                                                                                                                                                                     |           |
| 8         | When main code "8" is entered, the following LCD screen is displayed.                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |
|           | <div style="border: 1px solid black; padding: 5px;"> SIMULATION NO.8<br/> INPUT 1-7<br/> 1.DEVELOPING BIAS VOLTAGE TEST<br/> 2.MAIN HIGH VOLTAGE UNIT TEST.<br/> 3.MAIN HIGH VOLTAGE UNIT TEST.(PHOTO MODE)<br/> 4.MAIN HIGH VOLTAGE UNIT TEST.(TONER SAVE MODE)<br/> 5.PRE-TRANSFER HIGH VOLTAGE UNIT TEST<br/> 6.TRANSFER HIGH VOLTAGE UNIT TEST.<br/> 7.SEPARATION HIGH VOLTAGE UNIT TEST. </div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |
|           | 01                                                                                                                                                                                                                                                                                                                                                                                                   | Used for adjustment and check of the developing bias high voltage (VD). The output value is about -51.1V to -350V for the input value of 3 to 56.<br>(Note) Input value 0 - 2: Output of -51.5V<br>Standard set value: 30                                                                                                                                                                                                                       | 6-2       |
|           | 02                                                                                                                                                                                                                                                                                                                                                                                                   | No. 8-2: Used for adjustment and check of the main charger (ME/AE) high voltage.<br>The output value is about -270V to -970V for the input value of 137 to 510.<br>(Note) Input value of 0 - 136: Output value of -270V                                                                                                                                                                                                                         | 6-18      |
|           | 03                                                                                                                                                                                                                                                                                                                                                                                                   | No. 8-3: Used for adjustment and check of the main charger (PHOTO) high voltage.<br>The output value is about -270V to -970V for the input value of 137 to 510.<br>(Note) Input value of 0 - 136: Output value of -270V                                                                                                                                                                                                                         | 6-18      |
|           | 04                                                                                                                                                                                                                                                                                                                                                                                                   | No. 8-4: Used for adjustment and check of the main charger (TSM) high voltage.<br>The output value is about -270V to -970V for the input value of 137V to 510V.<br>(Note) Input value of 0 - 136: Output value of -270V                                                                                                                                                                                                                         | 6-18      |
|           | 05                                                                                                                                                                                                                                                                                                                                                                                                   | Used for check of PTC (pre-transfer charger) high voltage.                                                                                                                                                                                                                                                                                                                                                                                      | 6-17      |

| Main code | Sub code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Ref. page |
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| 8         | 06       | Used for adjustment and check of the transfer charger high voltage (TC). The output value is about -2.6 $\mu$ A to -700 $\mu$ A for the input value of 3 to 56.<br>(Note) Input value of 0 to 2: output level of 0 $\mu$ A                                                                                                                                                                                                                                                                                                                                                                                                              | 6-16      |
|           | 07       | Used for adjustment and check of the separation charger high voltage (BC). The output value is 100V to 700V for the input value of 18 to 56.<br>(Note) Input value of 0 -17: output value of 100V                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |
| 10        |          | When main code "10" is entered, the following LCD screen is displayed.<br>TONER MOTOR OPERATION<br>ARE YOU SURE ?<br>1. YES      2. NO<br>When "1" is selected and the start key is pressed, the toner motor starts rotating with the above screen unchanged.<br>When "2" is selected and the start key is pressed, the toner motor doesn't rotate and the machine goes into the main code input standby mode.<br>(Note) When "1" is selected and the start key is pressed, then when "2" is selected and the start key is pressed, the toner motor is stopped and the machine goes into the main code standby mode.                    |           |
| 13        |          | Reset is performed only for "U1" trouble.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |
| 14        |          | Reset is performed except for "U2", "U1" and "PF" trouble.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |
| 15        |          | When main code "15" is entered, the following LCD screen is displayed.<br><div style="border: 1px solid black; padding: 5px; margin: 10px 0;">SIMULATION NO.15<br/>TRAY1:** TRAY2:** TRAY3:**<br/>TROUBLE CODE<br/>00:NO TROUBLE<br/>01:PT DISK TROUBLE<br/>02:TRAY UP TROUBLE<br/>04:TRAY DOWN TROUBLE</div><br>(Note) "x:x" in the display shows trouble code.<br>When the START Key is pressed in this state, all tray troubles are reset.                                                                                                                                                                                           |           |
| 16        |          | "U2" trouble is reset.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |
| 17        |          | "PF" trouble is reset. (The copy inhibit command is cancelled.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |
| 20        |          | When main code "20" is entered, the following LCD screen is displayed.<br>MAINTENANCE COUNTER CLEAR<br>ARE YOU SURE ?<br>1. YES      2. NO<br>When "1" is selected, the maintenance counter is cleared.<br>When "2" is selected, the maintenance counter is not cleared and the machine goes into main code standby.                                                                                                                                                                                                                                                                                                                    |           |
| 21        |          | When main code "21" is entered, the following LCD screen is displayed.<br><div style="border: 1px solid black; padding: 5px; margin: 10px 0;">SIMULATION NO.21<br/>INPUT 1-2<br/>1.MAINTENANCE CYCLE SETTING<br/>2.(NO PROGRAM)</div>                                                                                                                                                                                                                                                                                                                                                                                                   |           |
|           | 01       | When sub code "1" is entered, the following message is displayed in the basic screen.<br>SIMULATION NO.21-1<br>SELECT MAINTENANCE CYCLE(1-3)<br>1. 125K      2. 250K      3. NONE<br>When "1" is selected, the following message is displayed after copying 125,000 sheets to notify the maintenance cycle is reached.<br>READY TO COPY<br>MAINTENANCE REQUIRED:A<br>When "2" is selected, the following message is displayed after copying 250,000 sheets to notify the maintenance cycle is reached.<br>READY TO COPY<br>MAINTENANCE REQUIRED:B<br>When "3" is selected, no maintenance cycle is set.<br>Standard set value: 2 (NONE) |           |
|           | 02       | (NO PROGRAM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |

| Main code | Sub code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Ref. page |
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| 22        |          | <p>When main code "22" is entered, the following LCD screen is displayed.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> SIMULATION NO.22<br/> INPUT 1-5<br/> 1.COUNTER DATA DISPLAY<br/> 2.JAM COUNTER DATA DISPLAY<br/> 3.ERROR COUNTER DATA DISPLAY<br/> 4.KEY OPERATOR CODE DISPLAY<br/> 5.ROM VERSION DATA DISPLAY </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |
|           | 01       | <p>During execution, the following message is displayed in the basic screen, and the corresponding counter value is displayed. The message cycles every time  key is pressed, and the corresponding value is displayed.</p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>SIMULATION NO.22-1<br/> TOTAL : **,***,***<br/> MAINTENANCE : **,***,***<br/> COPIES : **,***,*** 1/4</p> <p style="text-align: center;">↓  KEY ON</p> <p>SIMULATION NO.22-1<br/> DEVELOPER : **,***,***<br/> RADF : **,***,***<br/> STAPLER : **,***,*** 2/4</p> <p style="text-align: center;">↓  KEY ON</p> <p>SIMULATION NO.22-1<br/> DUPLEX : **,***,***<br/> BYPASS TRAY : **,***,***<br/> TRAY 1 : **,***,*** 3/4</p> <p style="text-align: center;">↓  KEY ON</p> <p>SIMULATION NO.22-1<br/> TRAY 2 : **,***,***<br/> TRAY 3 : **,***,*** 4/4</p> <p style="text-align: center;">↓  KEY ON</p> </div>                                                                                                                                                                                                                                                                                                          |           |
| 22        | 02       | <p>During execution, the following message is displayed on the basic screen. The JAM display and its contents are shown in (9) "JAM display and contents."</p> <p>SIMULATION NO.22-2<br/> SELECT JAM COUNTER.(1~2)<br/> 1. MACHINE 2. RADF</p> <p>When "1" is selected, the total jam number (8 digits) of the main body is displayed. When the following procedure is performed, the jam positions are displayed from the latest one sequentially. (MAX: 256)</p> <p>SIMULATION NO.22-2<br/> TOTAL MACHINE JAM:..... 1<br/>                               **,***,*** ← (Total jam number)</p> <p>(Jam positions)               ↓  KEY ON<br/> (Max.256 positions)<br/> *****, *****, *****, *****, *****<br/> *****, *****, *****, *****, *****<br/>                                           1 / * ← (Max. display number)</p> <p style="text-align: center;">↓  KEY ON</p> <p>*****, *****, *****, *****, *****<br/> *****, *****, *****, *****, *****<br/>                                           2 / *<br/>                                           ↓  KEY ON *</p> <p>(Note) When the information key is pressed with the jam positions displayed, the mode returns to the state of (1).<br/> When "2" is selected, the total jam number of RADF is displayed. When the following procedure is performed, the jam positions are displayed from the latest one sequentially.</p> |           |

| Main code | Sub code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Ref. page |
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| 22        | 02       | <p>SIMULATION NO.22-2<br/> TOTAL RADF JAM: ..... 1<br/> ** , ***, *** ← (Total jam number)<br/> (Jam positions) ↓ <input checked="" type="checkbox"/> KEY ON<br/> (Max. 256 positions)<br/> *****, *****, *****, *****, *****<br/> *****, *****, *****, *****, *****<br/> 1 / * ← (Max. display number)<br/> ↓ <input type="checkbox"/> KEY ON<br/> *****, *****, *****, *****, *****<br/> *****, *****, *****, *****, *****<br/> 2 / *<br/> ↓ <input type="checkbox"/> KEY ON</p> <p>(Note) When <input checked="" type="checkbox"/> key is pressed with the jam positions displayed, the mode returns to the state of (1).</p>                                                                                                                                                                                                  |           |
|           | 03       | <p>During execution, the total error number is displayed on the LCD screen. When the following procedure is then performed the trouble codes are displayed from the latest one sequentially. (Max. 128 codes)</p> <p>SIMULATION NO.22-3<br/> TOTAL ERRORS: ** , ***, *** ← (Total error count number) ..... 1<br/> (Trouble code) ↓ <input checked="" type="checkbox"/> KEY ON<br/> **/**, **/**, **/**, **/**, **/**<br/> **/**, **/**, **/**, **/**, **/**<br/> ↓ <input type="checkbox"/> KEY ON 1 / * ← (Max. display number) (Max. 128 codes)<br/> **/**, **/**, **/**, **/**, **/**<br/> **/**, **/**, **/**, **/**, **/**<br/> ↓ <input type="checkbox"/> KEY ON 2 / *</p> <p>(Note) When <input checked="" type="checkbox"/> key is pressed with the trouble code displayed, the machine returns to the state of (1).</p> |           |
|           | 04       | <p>During execution, the following message is displayed on the basic screen as well as the key operator code.</p> <p>SIMULATION NO.22-4<br/> KEY OPERATOR: *****</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |
|           | 05       | <p>During execution, the following message is displayed on the basic screen, and each ROM version data is displayed.</p> <p>MAIN :V*.**MIRROR :V*.**<br/> OPE :V*.**SORTER :V*.**<br/> DATA :V*.**(***).RADF :V*.**</p> <p>(Note) V*.**: ROM version.<br/> (***): Each language data ENG, JPN, GER, FRN, DUT, SPN, ITA..</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |
| 23        |          | <p>When main code "23" is entered, the following LCD screen is displayed.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>SIMULATION NO.23<br/> INPUT 1-5<br/> 1.COUNTER DATA PRINTOUT<br/> 2.JAM COUNTER DATA PRINTOUT<br/> 3.ERROR COUNTER DATA PRINTOUT<br/> 4.KEY OPERATOR CODE PRINTOUT<br/> 5.ROM VERSION DATA PRINTOUT</p> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |

| ain code | Sub code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Ref. page |
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| 23       | 01       | <p>During execution, the following message is displayed on the basic screen.</p> <p>PUSH THE START/STOP KEY ON THE COUNTER COMMANDER.</p> <p>When the START/STOP key of the commander is pressed, the basic screen and the following message are displayed, and data is printed.</p> <p>--- CURRENTLY PRINTING ---</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |
|          | 02       | <p>During execution, the following message is displayed on the basic screen. When the following procedure is then performed, each JAM counter data is printed.</p> <p>SIMULATION NO.23-2</p> <p>SELECT JAM COUNTER</p> <p>1. MACHINE      2.RADF</p> <p>When "1" is selected, the following message is displayed. When the operations are performed according to the message instruction, the total jam counter content and the jam positions are printed in sequence showing the most recent jam first.</p> <p>When "2" is selected, the following message is displayed. When the operations are performed according to the message instruction, the RADF total jam counter content and the jam positions are printed in sequence showing the most recent jam first.</p> <p>PUSH THE START/STOP KEY ON THE COUNTER COMMANDER.</p> <p>When the START/STOP key of the commander is pressed, the basic screen and the following message are displayed, and data is printed.</p> <p>--- CURRENTLY PRINTING ---</p> <p>(Note) When executing SIMULATION NO.23-2, if any trouble occurs in the commander, the following message and the error code are displayed.</p> <p>COUNTER COMMANDER ERROR</p> <p>PLEASE CHECK      THE COMMANDER(SF-EA13).</p> <p>ERROR CODE : *</p> <p>(Error code) : *</p> <p>0                    : Transmission error</p> <p>1                    : Motor abnormality</p> <p>2                    : Home position error (Does not turn OFF.)</p> <p>3                    : Home position error (Does not turn ON.)</p> |           |
|          | 03       | <p>During execution, the following message is displayed on the basic screen.</p> <p>PUSH THE START/STOP KEY ON THE COUNTER COMMANDER.</p> <p>When the START/STOP key of the commander is pressed, the basic screen and the following message is displayed, and the data is printed.</p> <p>--- CURRENTLY PRINTING ---</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |
|          | 04       | <p>During execution, the following message is displayed on the basic screen.</p> <p>PUSH THE START/STOP KEY ON THE COUNTER COMMANDER.</p> <p>When the START/STOP key of the commander is pressed, the basic screen and the following message is displayed, and the data is printed.</p> <p>--- CURRENTLY PRINTING ---</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |
|          | 05       | <p>During execution, the following message is displayed on the basic screen.</p> <p>PUSH THE START/STOP KEY ON THE COUNTER COMMANDER.</p> <p>When the START/STOP key of the commander is pressed, the basic screen and the following message is displayed, and the data is printed.</p> <p>--- CURRENTLY PRINTING ---</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |

| Main code | Sub code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Ref. page |
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| 24        |          | <p>When main code "24" is entered, the following LCD screen is displayed.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>SIMULATION NO.24<br/> INPUT 1-7<br/> 1.JAM COUNTER DATA CLEAR.<br/> 2.ERROR (TROUBLE) COUNTER DATA CLEAR.<br/> 3.DUPLEX COUNTER CLEAR.<br/> 4.RDH/RADF COUNTER DATA CLEAR.<br/> 5.STAPLE COUNTER CLEAR.<br/> 6. TRAY COUNTER CLEAR<br/> 7.MEMBRANE DECREASE ADJUSTMENT CLEAR</p> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |
|           | 01       | <p>During execution, the following message is displayed on the basic screen.</p> <p>SIMULATION NO.24-1<br/> JAM COUNTER CLEAR. .... (1)<br/> 1. MACHINE    2. RADF    3. BOTH</p> <p>When "1" is selected and the following procedure is executed, the main body jam counter is cleared.<br/> When "2" is selected and the following procedure is executed, the RADF jam counter is cleared.<br/> When "3" is selected and the following procedure is executed, both the main body jam counter and the RADF jam counter are cleared.</p> <p>↓10 KEY (1~3) ON<br/> SIMULATION NO.24-1<br/> * COUNTER CLEAR.<br/> ARE YOU SURE ? .... (2)<br/> 1 .YES    2 .NO</p> <p>When "1" is selected, the counter is cleared.<br/> When "2" is selected, the counter is not cleared and the mode returns to (1).<br/> (Note) "*" in message (2):<br/> When "1" is selected with display (1): MACHINE<br/> When "2" is selected with display (1): RADF<br/> When "3" is selected with display (1): MACHINE/RADF</p> |           |
|           | 02-06    | <p>During execution, the following message is displayed on the basic screen. (When the following procedure is executed, each counter is cleared).</p> <p>SIMULATION NO.24-*<br/> (*) COUNTER CLEAR. .... (3)<br/> ARE YOU SURE ?<br/> 1.YES    2.NO</p> <p>When "1" is executed, the counter is cleared.<br/> When "2" is executed, the counter is not cleared.<br/> (Note) "*" in message (3) : 2~6 (Numeric figure)<br/> : * =2 (*)=ERROR<br/> : * =3 (*)=DUPLEX<br/> : * =4 (*)=RDH/RADF<br/> : * =5 (*)=STAPLE<br/> : * =6 (*)=TRAY</p> <p>NO.24-2: The error counter is cleared.<br/> NO.24-3: The duplex counter is cleared.<br/> NO.24-4: The RADF counter is cleared.<br/> NO.24-5: The staple counter is cleared.<br/> NO.24-6: The tray counter is cleared.</p>                                                                                                                                                                                                                              |           |
|           | 07       | <p>Used to clear the membrane decrease counter of the photoconductor. During execution, the following message is displayed.</p> <p>SIMULATION no.24-7<br/> MEMBRANE DECREASE ADJUSTMENT CLEAR.<br/> ARE YOU SURE?<br/> 1: YES 2: NO</p> <p>When "1" is selected, the counter is cleared.<br/> When "2" is selected, the counter is not cleared.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |

| Main code | Sub code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Ref. page |
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| 25        |          | When main code "25" is entered, the following LCD screen is displayed.<br><div>SIMULATION NO.25<br/>INPUT 1-2<br/>1.TONER DENSITY SENSOR MONITOR<br/>2.AUTOMATIC TONER CONCENTRATION ADJUSTMENT/DV STIR.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |
|           | 01       | During execution, the drum motor rotates for 3 minutes to allow checking of the drum motor drive operation. The toner concentration sensor can be monitored with the COPIES MADE display.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |
|           | 02       | During execution, developer adjustment is automatically performed and the set value is displayed in the COPIES MADE display.<br>(Adjustment procedure) Stirs for 3 minutes, then monitors the sensor for 16 cycles and stores the average memory as the toner concentration adjustment value.                                                                                                                                                                                                                                                                                                                                                                |           |
| 26        |          | When main code "26" is entered, the following LCD screen is displayed.<br><div>SIMULATION NO.26<br/>INPUT 1-8<br/>1.OPTION SETUP.<br/>2. TRAY1 SIZE SETUP.<br/>3.AUDITOR SELECTION.<br/>4.(NO PROGRAM)<br/>5.COUNTER MODE SETUP.<br/>6.DESTINATION SETUP.<br/>7.DRUM SENSITIVITY SETUP.<br/>8. TRAY PAPER EMPTY SENSE TIME SETTING</div>                                                                                                                                                                                                                                                                                                                     |           |
|           | 01       | When sub code "1" is entered, the following LCD screen is displayed, allowing option setting.<br><div>OPTION SETUP<br/>1.FINISHER/NO SORTER.<br/>2.NO FINISHER/NO SORTER.<br/>3.SORTER/STAPLE SORTER.</div><br>Default : 1.FINISHER/NO SORTER                      Factory setting: 1                                                                                                                                                                                                                                                                                                                                                                        |           |
|           | 02       | During execution, the following message is displayed, allowing TRAY1 size setting.<br>(Setting procedure) Select the size and press the start key.<br><div>SIMULATION NO.26-2<br/>1. 8.5*11<br/>2. A4<br/>3. B5<br/>SELECT NUMBER FOR TRAY1<br/>PAPER SIZE.</div><br>Default : 1.8.5*11                      Factory setting: 2                                                                                                                                                                                                                                                                                                                              |           |
|           | 03       | During execution, the following message is displayed on the basic screen, allowing mode setting of each auditor.<br>01. P10(500)    02. P10(3100)<br>03. SF_EA11    04. OTHER<br>(Note) 1. Built-in auditor mode<br>2. Built-in auditor + expanded auditor mode<br>3. Card counter mode<br>4. Others<br>When "2" is selected, the following message is displayed in the basic screen.<br>DO YOU NEED THE EXTRA MEMORY INITIAL?<br>1. YES    2. NO<br>(Note) When "1.YES" is selected, expansion memory data initializing is performed.<br>When "2.NO" is selected, expansion memory data initializing is not performed.<br>Default : 1.Built-in auditor mode |           |

| Main code | Sub code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Ref. page |
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| 26        | 04       | (No program)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |
|           | 05       | <p>During execution, the following message is displayed, allowing setting of the counter mode.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> SIMULATION NO.26-5<br/> COUNTER MODE SETUP.<br/> CODE TOTAL COUNT,      MAINTEN COUNT<br/> 0      DOUBLE COUNT DOUBLE COUNT<br/> 1      SINGLE COUNT DOUBLE COUNT<br/> 2      DOUBLE COUNT SINGLE COUNT<br/> 3      SINGLE COUNT SINGLE COUNT<br/> PLEASE      SELECT BY<br/> 10 KEY PAD. </div> <p>Standard set value: 0 (DOUBLE COUNT, DOUBLE COUNT)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |
|           | 06       | <p>During execution, the following message is displayed, allowing destination setting.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> SIMULATION NO.26-6<br/> [INCH]<br/> 1.SEC    2.SECL    3.OTHER<br/> [AB(B5)]<br/> 4.JAPAN/15A    5.JAPAN/20A<br/> [AB(A5)]<br/> 6.SEEG    7.SUK    8.SCA<br/> 9.OTHER<br/> PLEASE SELECT DESTINATION<br/> BY 10 KEY PAD. </div> <p>When "5.JAPAN/20A" is selected for the main body of 15A specification, "H4" trouble may occur.</p> <p>Default: 1. SEC</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |
|           | 07       | <p>Photoconductor drum sensitivity setting</p> <p>The set value to be entered is the first digit of the 9-digit drum number on the label attached to the inside of the photoconductor drum.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> SD360DR<br/> ②***** </div> <p>Drum sensitivity set value (1 - 3)</p> <p>(Note) Set value    1: Current copy lamp voltage +1(V)<br/>                               2: Current copy lamp voltage <math>\pm 0</math>(V)<br/>                               3: Current copy lamp voltage -1(V)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |
|           | 08       | <p>(Tray paper empty sensor time setting)</p> <p>Tray paper empty sensor time can be set using the 10 key pad.</p> <p>The adjustment contents is displayed on the COPIES MADE display, and the set value is displayed on the COPIES MADE display.</p> <div style="margin: 10px 0;"> <div style="border: 1px solid black; padding: 5px; display: inline-block;"> SIMULATION NO.26-8<br/> INPUT TRAY-1 EMPTY DATA (1-30) </div> <div style="margin-left: 20px;">↓ SCR KEY ON</div> <div style="border: 1px solid black; padding: 5px; display: inline-block;"> SIMULATION NO.26-8<br/> INPUT TRAY-2 EMPTY DATA (1-30) </div> <div style="margin-left: 20px;">↓ SCR KEY ON</div> <div style="border: 1px solid black; padding: 5px; display: inline-block;"> SIMULATION NO.26-8<br/> INPUT TRAY-3 EMPTY DATA (1-30) </div> <div style="margin-left: 20px;">SCR KEY ON</div> </div> <p>Adjustment content:</p> <p>26-8A: (Tray 1)<br/> 26-8B: (Tray 2)<br/> 26-8C: (Tray 3)</p> <p>Adjustment range: ABC 1-30 (*10ms)</p> <p>Paper empty sense method:    Time required from the tray upper limit SW OFF -- the lift motor drive ON-- to when the upper limit SW ON is read. If the time is greater than the set value of simulation 26-8, it is judged as paper empty.</p> <p>If the set value is too small:    Paper empty is erroneously detected and the tray descends.</p> <p>If the set value is too great:    The last paper is squeezed between the tray and the air paper feed belt to cause a misfeed.</p> <p>* When adjustment value = 0, the same control operation is performed with the adjustment value = 12.</p> |           |

| Main code | Sub code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Ref. page |
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| 27        |          | <p>When main code 27<sup>00</sup> is entered, the following LCD screen is displayed.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> SIMULATION NO.27<br/> INPUT 1-5<br/> 1.DISABLING OF U7-00 TROUBLE<br/> 2.PC/MODEM DATA CHANGE.:TEL #<br/> 3.PC/MODEM DATA CHANGE.:ID #<br/> 4.SERVICE START/END REPORT.<br/> 5.TAG NUMBER SETTING. </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |
|           | 01       | <p>During execution, the following message is displayed on the basic screen, allowing setting of communication trouble (U7-00).</p> <p>SIMULATION NO.27-1<br/> DISABLING OF U7-00 TROUBLE<br/> 0. YES      1. NO</p> <p>When "0" is selected, the machine is not stopped even when PC/MODEM communication trouble occurs.<br/> When "1" is selected, the machine is stopped when PC/MODEM communication trouble occurs.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |
|           | 02       | <p>During execution, the following message is displayed on the basic screen, allowing setting of the host computer telephone number.</p> <p>Use the 10 key pad to enter the host computer telephone number.</p> <p>SIMULATION NO.27-2<br/> SELECT HOST NUMBER TO CHANGE DATA.<br/> 1.HOST1    2.HOST2    3.HOST3    4.HOST4</p> <p>(When "1" is selected:)<br/> The following message is displayed in the basic screen.</p> <p>SIMULATION NO.27-2<br/> SELECT TEL TO CHANGE DATA. [HOST1]<br/> 1.TEL1    2.TEL2    3.TEL3    4.TEL4</p> <p>Use the 10 key to set the telephone number. When "1" is pressed, for example, the following message (A) message (B) are displayed.</p> <p>SIMULATION NO.27-2<br/> HOST1 TEL1:***** (A)<br/> SIMULATION NO.27-2<br/> HOST1 TEL1:***** (1)***** ← 24 digits<br/> --- CHANGE DATA: 1. YES    2. NO ***** (B)</p> <p>(Note) (1) ***** Registered telephone number</p> <p>When "1.YES" is selected with message (B) displayed, the following message is displayed to allow entering a new telephone number.</p> <p>SIMULATION NO.27-2<br/> HOST1 TEL1: *:[*];#[→];, ; [P]<br/> NEW DATA :***** (2)***** ← 24 digits<br/> (Note) (2) ***** Telephone number to be newly registered.</p> <p>After completion of input, communication with the Modem is effective, and when the PRINT switch is pressed, the following message is displayed, allowing checking of the registered telephone number.</p> <p>SIMULATION NO.27-2<br/> HOST*TEL1:***** (2)***** ← (24 digits)</p> <p>(When 2, 3, or 4 is selected:)<br/> Telephone number can be set similarly to 1.</p> |           |
|           | 03       | <p>During execution, the following message is displayed on the basic screen.</p> <p>SIMULATION NO.27-3<br/> SELECT NUMBER TO CHANGE DATA.<br/> 1. PPC ID      2. PC/MODEM ID</p> <p>(When "1" is selected:)<br/> The following message (A) and (B) are displayed in the basic screen.</p> <p>SIMULATION NO.27-3<br/> PPC ID:X:[*],Y:[→] ***** (A)<br/> SIMULATION NO.27-3<br/> PPC ID:X:[*],Y:[→] ***** (B)<br/> ***** (2)***** → ***** (3) *****</p> <p>(Note) "***** (2)*****": Previously registered telephone number</p> <p>When message (B) is displayed, "PPC ID" can be set with 10 key pad, and the set ID number is displayed in "***** (3)*****" (Max. 10 digits). Then communication with the modem is effective. When the start key is pressed, the new telephone number is registered and the following message is displayed.</p> <p>SIMULATION NO.27-3<br/> PPC ID#: ***** (3) *****</p> <p>(When "2" is selected:)<br/> PPC/MODEM ID can be set similarly to 1.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |

| Main code | Sub code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Ref. page |
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| 27        | 04       | <p>During execution, the following message is displayed on the basic screen, allowing setting of service start/end.</p> <p>SIMULATION NO.27-4</p> <p>1. SERVICE START.</p> <p>2. SERVICE END.</p> <p>(Service start)</p> <p>When "1" is selected, the following message is displayed, and the PPC sends "SERVICE START" command to the PC/MODEM.</p> <p>SIMULATION NO.27-4</p> <p>SERVICE START.</p> <p>When the PC/MODEM receives the command normally, the following message is displayed.</p> <p>SIMULATION NO.27-4</p> <p>SERVICE START</p> <p>Complete...</p> <p>(Service end)</p> <p>When "2" is selected, the following message is displayed, and the PPC sends "SERVICE END" command to the PC/MODEM.</p> <p>SIMULATION NO.27-4</p> <p>SERVICE END</p> <p>When the PPC receives the command normally, the following message is displayed.</p> <p>SIMULATION NO.27-4</p> <p>SERVICE END.</p> <p>Complete...</p> |           |
|           | 05       | <p>During execution, the following message is displayed.</p> <p>SIMULATION NO.27-5</p> <p>PRESENT TAG: *****</p> <p>NEW TAG :</p> <p>Then a tag number (8 digits) can be entered with 10 key pad. After entering, press the print switch, and the following message will be displayed, allowing tag number setting and checking.</p> <p>SIMULATION NO.27-5</p> <p>TAG: *****</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |
| 28        |          | <p>When main code "28" is entered, the following LCD screen is displayed.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>SIMULATION NO.28</p> <p>INPUT 1-4</p> <p>1.PRINTER CHARACTER GENERATOR PRINTOUT</p> <p>2.PRINTER TEST OPERATION</p> <p>3.KEY OPERATOR PROGRAM DATA PRINTOUT</p> <p>4.BACKUP DATA PRINTOUT</p> </div> <p>(Note) When executing SIMULATION 28 modes 1~4, if any trouble occurs in the commander, the following message and error code are displayed.</p> <p>COUNTER COMMANDER ERROR</p> <p>PLEASE CHECK THE COMMANDER (SF_EA13)</p> <p>ERROR CODE: *</p> <p>(Error code) : *</p> <p>0 : Transmission error</p> <p>1 : Motor abnormality</p> <p>2 : Home position error (Does not turn OFF)</p> <p>3 : Home position error (Does not turn ON)</p>                                                                                                                   |           |
|           | 01       | <p>During execution, the following message is displayed on the basic screen.</p> <p>SIMULATION NO.28-1</p> <p>PUSH THE START/STOP KEY ON THE COUNTER ***** (A)</p> <p>COMMANDER</p> <p>When the START/STOP key of the commander is pressed here, the following message is displayed on the basic screen, and the commander prints ASCII codes from the smallest number in sequence.</p> <p>(During printing) SIMULATION NO.28-1</p> <p>--- CURRENTLY PRINTING --- ***** (B)</p> <p>When the START/STOP key is pressed, the line being printed will be completely printed. When the printing operation is stopped, the mode returns to message (A). When the START/STOP key is pressed again here, the message is changed to message (B), and the printing is resumed from the next line of the last printed line.</p>                                                                                                  |           |

| Main code                                      | Sub code                                             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Ref. page                  |                                             |                            |                                                      |                            |                                        |                                           |                                   |                                 |                               |                                 |                                |                                 |                          |                                 |                        |                              |                                |                         |                                   |                                            |                                      |                                                |                            |                                      |                                       |
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| 28                                             | 02                                                   | <p>During execution, the following message is displayed on the basic screen.</p> <p>SIMULATION NO.28-2<br/>PUSH THE START/STOP KEY ON THE COUNTER<br/>COMMANDER</p> <p>When the START/STOP key of the commander is pressed here, the following message is displayed in the basic screen, and six lines of "" is printed as test print of the printer. After that, when the START/STOP key of the commander is pressed during printing, printing operation is stopped. When the START/STOP key is pressed again, printing is resumed from the beginning.</p> <p>SIMULATION NO.28-2<br/>--- CURRENTLY PRINTING ---</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            |                                             |                            |                                                      |                            |                                        |                                           |                                   |                                 |                               |                                 |                                |                                 |                          |                                 |                        |                              |                                |                         |                                   |                                            |                                      |                                                |                            |                                      |                                       |
|                                                | 03                                                   | <p>During execution, the following message is displayed on the basic screen.</p> <p>SIMULATION NO.28-3<br/>PUSH THE START/STOP KEY ON THE COUNTER<br/>COMMANDER</p> <p>When the START/STOP key of the commander is pressed here, the following message is displayed in the basic screen and the set values of the key operator programs are printed.</p> <p>SIMULATION NO.28-3<br/>--- CURRENTLY PRINTING ---</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                            |                                             |                            |                                                      |                            |                                        |                                           |                                   |                                 |                               |                                 |                                |                                 |                          |                                 |                        |                              |                                |                         |                                   |                                            |                                      |                                                |                            |                                      |                                       |
|                                                | 04                                                   | <p>During execution, the following message is displayed on the basic screen.</p> <p>SIMULATION NO.28-4<br/>PUSH THE START/STOP KEY ON THE COUNTER<br/>COMMANDER</p> <p>When the START/STOP key of the commander is pressed here, the following message is displayed in the basic screen and the set values of the simulation codes are printed.</p> <p>SIMULATION NO.28-4<br/>--- CURRENTLY PRINTING ---</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                            |                                             |                            |                                                      |                            |                                        |                                           |                                   |                                 |                               |                                 |                                |                                 |                          |                                 |                        |                              |                                |                         |                                   |                                            |                                      |                                                |                            |                                      |                                       |
| 30                                             |                                                      | <p>When main code "30" is entered, the following LCD screen is displayed.</p> <div><p>SIMULATION NO.30<br/>INPUT 1-2<br/>1.MAIN FRAME SENSOR TEST.<br/>2. TRAY SENSOR TEST.</p></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                            |                                             |                            |                                                      |                            |                                        |                                           |                                   |                                 |                               |                                 |                                |                                 |                          |                                 |                        |                              |                                |                         |                                   |                                            |                                      |                                                |                            |                                      |                                       |
|                                                | 01                                                   | <p>During execution, the following message is displayed, allowing the main body sensor check.</p> <div><p>SIMULATION NO. 30-1<br/>PFD1, PFD2, PFD3, DPFD, MPFD<br/>PPD1, PPD2, PPD3, PSD, POD<br/>DPID, DPPD, DTPD, DTWHP, DTBHP<br/>FUSUS, TBBOX, TNF, TNCTR, TES<br/>DSW, DDSW, DSBD, MDOP, POD2<br/>TFD</p></div> <p>(Note) Detected: Highlighted.</p> <table><tr><td>PFD1 : Paper feed sensor 1</td><td>DTWHP : Duplex copy tray paper entry sensor</td></tr><tr><td>PFD2 : Paper feed sensor 2</td><td>DTBHP : Duplex copy tray rear edge guide home sensor</td></tr><tr><td>PFD3 : Paper feed sensor 3</td><td>FUSUS : Fuser unit installation sensor</td></tr><tr><td>DPFD : Duplex copy tray paper feed sensor</td><td>TBBOX : Waste toner bottle sensor</td></tr><tr><td>MPFD : Manual paper feed sensor</td><td>TNF : Waste toner full sensor</td></tr><tr><td>PPD1 : Paper transport sensor 1</td><td>TNCTR : Toner cartridge switch</td></tr><tr><td>PPD2 : Paper transport sensor 2</td><td>TES : Toner empty sensor</td></tr><tr><td>PPD3 : Paper transport sensor 3</td><td>DSW : Door switch 1, 2</td></tr><tr><td>PSD : Paper speration sensor</td><td>DDSW : Duplex copy tray switch</td></tr><tr><td>POD : Paper exit sensor</td><td>DSBD : Revers section door switch</td></tr><tr><td>DPID : Duplex copy tray paper entry sensor</td><td>MDOP : Manual tray open/close sensor</td></tr><tr><td>DPPD : Duplex copy tray paper transport sensor</td><td>POD2 : Paper exit sensor 2</td></tr><tr><td>DTPD : Duplex copy tray paper sensor</td><td>TFD : Copy reception tray full sensor</td></tr></table> | PFD1 : Paper feed sensor 1 | DTWHP : Duplex copy tray paper entry sensor | PFD2 : Paper feed sensor 2 | DTBHP : Duplex copy tray rear edge guide home sensor | PFD3 : Paper feed sensor 3 | FUSUS : Fuser unit installation sensor | DPFD : Duplex copy tray paper feed sensor | TBBOX : Waste toner bottle sensor | MPFD : Manual paper feed sensor | TNF : Waste toner full sensor | PPD1 : Paper transport sensor 1 | TNCTR : Toner cartridge switch | PPD2 : Paper transport sensor 2 | TES : Toner empty sensor | PPD3 : Paper transport sensor 3 | DSW : Door switch 1, 2 | PSD : Paper speration sensor | DDSW : Duplex copy tray switch | POD : Paper exit sensor | DSBD : Revers section door switch | DPID : Duplex copy tray paper entry sensor | MDOP : Manual tray open/close sensor | DPPD : Duplex copy tray paper transport sensor | POD2 : Paper exit sensor 2 | DTPD : Duplex copy tray paper sensor | TFD : Copy reception tray full sensor |
| PFD1 : Paper feed sensor 1                     | DTWHP : Duplex copy tray paper entry sensor          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |                                             |                            |                                                      |                            |                                        |                                           |                                   |                                 |                               |                                 |                                |                                 |                          |                                 |                        |                              |                                |                         |                                   |                                            |                                      |                                                |                            |                                      |                                       |
| PFD2 : Paper feed sensor 2                     | DTBHP : Duplex copy tray rear edge guide home sensor |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |                                             |                            |                                                      |                            |                                        |                                           |                                   |                                 |                               |                                 |                                |                                 |                          |                                 |                        |                              |                                |                         |                                   |                                            |                                      |                                                |                            |                                      |                                       |
| PFD3 : Paper feed sensor 3                     | FUSUS : Fuser unit installation sensor               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |                                             |                            |                                                      |                            |                                        |                                           |                                   |                                 |                               |                                 |                                |                                 |                          |                                 |                        |                              |                                |                         |                                   |                                            |                                      |                                                |                            |                                      |                                       |
| DPFD : Duplex copy tray paper feed sensor      | TBBOX : Waste toner bottle sensor                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |                                             |                            |                                                      |                            |                                        |                                           |                                   |                                 |                               |                                 |                                |                                 |                          |                                 |                        |                              |                                |                         |                                   |                                            |                                      |                                                |                            |                                      |                                       |
| MPFD : Manual paper feed sensor                | TNF : Waste toner full sensor                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |                                             |                            |                                                      |                            |                                        |                                           |                                   |                                 |                               |                                 |                                |                                 |                          |                                 |                        |                              |                                |                         |                                   |                                            |                                      |                                                |                            |                                      |                                       |
| PPD1 : Paper transport sensor 1                | TNCTR : Toner cartridge switch                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |                                             |                            |                                                      |                            |                                        |                                           |                                   |                                 |                               |                                 |                                |                                 |                          |                                 |                        |                              |                                |                         |                                   |                                            |                                      |                                                |                            |                                      |                                       |
| PPD2 : Paper transport sensor 2                | TES : Toner empty sensor                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |                                             |                            |                                                      |                            |                                        |                                           |                                   |                                 |                               |                                 |                                |                                 |                          |                                 |                        |                              |                                |                         |                                   |                                            |                                      |                                                |                            |                                      |                                       |
| PPD3 : Paper transport sensor 3                | DSW : Door switch 1, 2                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |                                             |                            |                                                      |                            |                                        |                                           |                                   |                                 |                               |                                 |                                |                                 |                          |                                 |                        |                              |                                |                         |                                   |                                            |                                      |                                                |                            |                                      |                                       |
| PSD : Paper speration sensor                   | DDSW : Duplex copy tray switch                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |                                             |                            |                                                      |                            |                                        |                                           |                                   |                                 |                               |                                 |                                |                                 |                          |                                 |                        |                              |                                |                         |                                   |                                            |                                      |                                                |                            |                                      |                                       |
| POD : Paper exit sensor                        | DSBD : Revers section door switch                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |                                             |                            |                                                      |                            |                                        |                                           |                                   |                                 |                               |                                 |                                |                                 |                          |                                 |                        |                              |                                |                         |                                   |                                            |                                      |                                                |                            |                                      |                                       |
| DPID : Duplex copy tray paper entry sensor     | MDOP : Manual tray open/close sensor                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |                                             |                            |                                                      |                            |                                        |                                           |                                   |                                 |                               |                                 |                                |                                 |                          |                                 |                        |                              |                                |                         |                                   |                                            |                                      |                                                |                            |                                      |                                       |
| DPPD : Duplex copy tray paper transport sensor | POD2 : Paper exit sensor 2                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |                                             |                            |                                                      |                            |                                        |                                           |                                   |                                 |                               |                                 |                                |                                 |                          |                                 |                        |                              |                                |                         |                                   |                                            |                                      |                                                |                            |                                      |                                       |
| DTPD : Duplex copy tray paper sensor           | TFD : Copy reception tray full sensor                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |                                             |                            |                                                      |                            |                                        |                                           |                                   |                                 |                               |                                 |                                |                                 |                          |                                 |                        |                              |                                |                         |                                   |                                            |                                      |                                                |                            |                                      |                                       |

| Main code | Sub code              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Ref. page |                       |     |                        |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |   |   |   |         |   |   |   |     |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |  |
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| 30        | 02                    | <div>During execution, the following message is displayed, allowing the tray sensor check.</div> <div><div><div>SIMULATION NO.30-2</div><div>NFT:MPED, MPD1, MPD2</div><div><div>TRAY1: TCD1, TLD1, TUD1, TLMD1, TPTD1</div><div>TSW1</div></div><div><div>TRAY2: TCD2, TLD2, TUD2, TLMD2, TPTD2</div><div>TSW2, PS21, PS22, PS23, PS24</div><div>PS25, PS26</div></div><div><div>TRAY3: TCD3, TLD3, TUD3, TLMD3, TPTD3</div><div>TSW3, PS31, PS32, PS33, PS34</div><div>PS35, PS36</div></div></div></div> <div><div>&lt;TRAY 1&gt;</div><div><div>TCD1 : Paper feed tray set sensor 1</div><div>TLD1 : Paper feed tray lower limit sensor 1</div><div>TUD1 : Paper feed tray rising sensor 1</div><div>TLMD1 : Paper feed tray upper limit sensor 1</div><div>TPTD1 : Paper feed tray PT sensor 1</div><div>TSW1 : Paper feed tray switch 1</div></div><div><div>PS21 : Paper feed tray paper size sensor 21(See the table below)</div><div>PS22 : Paper feed tray paper size sensor 22(See the table below)</div><div>PS23 : Paper feed tray paper size sensor 23(See the table below)</div><div>PS24 : Paper feed tray paper size sensor 24(See the table below)</div><div>PS25 : Paper feed tray paper size sensor 25(See the table below)</div><div>PS26 : Paper feed tray paper size sensor 26(See the table below)</div></div></div> <div><div>&lt;TRAY 2&gt;</div><div><div>TCD2 : Paper feed tray set sensor 2</div><div>TLD2 : Paper feed tray lower limit sensor 2</div><div>TUD2 : Paper feed tray rising sensor 2</div><div>TLMD2 : Paper feed tray upper limit sensor 2</div><div>TPTD2 : Paper feed tray TP sensor 2</div><div>TSW2 : Paper feed tray switch 2</div></div><div><div>PS31 : Paper feed tray paper size sensor 31(See the table below)</div><div>PS32 : Paper feed tray paper size sensor 32(See the table below)</div><div>PS33 : Paper feed tray paper size sensor 33(See the table below)</div><div>PS34 : Paper feed tray paper size sensor 34(See the table below)</div><div>PS35 : Paper feed tray paper size sensor 35(See the table below)</div><div>PS36 : Paper feed tray paper size sensor 36(See the table below)</div></div></div> <div><div>&lt;TRAY 3&gt;</div><div><div>TCD3 : Paper feed tray set sensor 3</div><div>TLD3 : Paper feed tray lower limit sensor 3</div><div>TUD3 : Paper feed tray rising sensor 3</div><div>TLMD3 : Paper feed tray upper limit sensor 3</div><div>TPTD3 : Paper feed tray PT sensor 3</div><div>TSW3 : Paper feed tray switch 3</div></div></div> <div><table><tr><td></td><td colspan="5">Paper width detection</td><td>Paper length detection</td></tr><tr><td></td><td>PS1</td><td>PS2</td><td>PS3</td><td>PS4</td><td>PS5</td><td>PS6</td></tr><tr><td>A4</td><td>—</td><td>—</td><td>OFF</td><td>—</td><td>—</td><td>OFF</td></tr><tr><td>A3</td><td>—</td><td>—</td><td>OFF</td><td>—</td><td>—</td><td>—</td></tr><tr><td>B5</td><td>—</td><td>OFF</td><td>—</td><td>—</td><td>—</td><td>OFF</td></tr><tr><td>B4</td><td>—</td><td>OFF</td><td>—</td><td>—</td><td>—</td><td>—</td></tr><tr><td>A4R</td><td>OFF</td><td>—</td><td>—</td><td>—</td><td>—</td><td>OFF</td></tr><tr><td>B5R</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td></tr><tr><td>11 × 8½</td><td>—</td><td>—</td><td>—</td><td>OFF</td><td>OFF</td><td>OFF</td></tr><tr><td>11 × 17</td><td>—</td><td>—</td><td>—</td><td>—</td><td>OFF</td><td>—</td></tr><tr><td>8½ × 11</td><td>OFF</td><td>—</td><td>—</td><td>—</td><td>—</td><td>OFF</td></tr><tr><td>8½ × 13</td><td>OFF</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td></tr><tr><td>8½ × 14</td><td>OFF</td><td>—</td><td>—</td><td>—</td><td>—</td><td>—</td></tr></table></div> |           | Paper width detection |     |                        |  |  | Paper length detection |  | PS1 | PS2 | PS3 | PS4 | PS5 | PS6 | A4 | — | — | OFF | — | — | OFF | A3 | — | — | OFF | — | — | — | B5 | — | OFF | — | — | — | OFF | B4 | — | OFF | — | — | — | — | A4R | OFF | — | — | — | — | OFF | B5R | — | — | — | — | — | — | 11 × 8½ | — | — | — | OFF | OFF | OFF | 11 × 17 | — | — | — | — | OFF | — | 8½ × 11 | OFF | — | — | — | — | OFF | 8½ × 13 | OFF | — | — | — | — | — | 8½ × 14 | OFF | — | — | — | — | — |  |
|           | Paper width detection |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |                       |     | Paper length detection |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |   |   |   |         |   |   |   |     |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |  |
|           | PS1                   | PS2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | PS3       | PS4                   | PS5 | PS6                    |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |   |   |   |         |   |   |   |     |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |  |
| A4        | —                     | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | OFF       | —                     | —   | OFF                    |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |   |   |   |         |   |   |   |     |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |  |
| A3        | —                     | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | OFF       | —                     | —   | —                      |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |   |   |   |         |   |   |   |     |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |  |
| B5        | —                     | OFF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | —         | —                     | —   | OFF                    |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |   |   |   |         |   |   |   |     |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |  |
| B4        | —                     | OFF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | —         | —                     | —   | —                      |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |   |   |   |         |   |   |   |     |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |  |
| A4R       | OFF                   | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | —         | —                     | —   | OFF                    |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |   |   |   |         |   |   |   |     |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |  |
| B5R       | —                     | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | —         | —                     | —   | —                      |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |   |   |   |         |   |   |   |     |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |  |
| 11 × 8½   | —                     | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | —         | OFF                   | OFF | OFF                    |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |   |   |   |         |   |   |   |     |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |  |
| 11 × 17   | —                     | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | —         | —                     | OFF | —                      |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |   |   |   |         |   |   |   |     |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |  |
| 8½ × 11   | OFF                   | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | —         | —                     | —   | OFF                    |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |   |   |   |         |   |   |   |     |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |  |
| 8½ × 13   | OFF                   | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | —         | —                     | —   | —                      |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |   |   |   |         |   |   |   |     |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |  |
| 8½ × 14   | OFF                   | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | —         | —                     | —   | —                      |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |   |   |   |         |   |   |   |     |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |  |
| 42        |                       | <div>When main code "42" is entered, the following LCD screen is displayed. When the following procedure is performed, the developer counter can be cleared.</div> <div>DEVELOPER COUNTER CLEAR</div> <div>ARE YOU SURE ?</div> <div>1. YES      2. NO</div> <div>When "1" is selected, the developer counter is cleared.</div> <div>When "2" is selected, the developer counter is not cleared.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |                       |     |                        |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |   |   |   |         |   |   |   |     |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |  |
| 43        |                       | <div>When main code "43" is entered, the following LCD screen is displayed, allowing fuser temperature setting.</div> <div><div><div>SIMULATION NO.43</div><div>INPUT 1-5</div><div>1.190C 2.195 3.200C</div><div>4.205C 5.210C</div></div></div> <div>(Note): The default setting is "3.200°C".</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |                       |     |                        |  |  |                        |  |     |     |     |     |     |     |    |   |   |     |   |   |     |    |   |   |     |   |   |   |    |   |     |   |   |   |     |    |   |     |   |   |   |   |     |     |   |   |   |   |     |     |   |   |   |   |   |   |         |   |   |   |     |     |     |         |   |   |   |   |     |   |         |     |   |   |   |   |     |         |     |   |   |   |   |   |         |     |   |   |   |   |   |  |

| Main code | Sub code                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Ref. page |  |        |         |   |                 |    |   |   |                            |    |   |   |                              |    |   |  |
|-----------|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--|--------|---------|---|-----------------|----|---|---|----------------------------|----|---|---|------------------------------|----|---|--|
| 44        |                              | <p>When main code "44" is entered, the following LCD screen is displayed.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>SIMULATION NO.44<br/> INPUT 1-9<br/> 1.DISABLE/ENABLE PROCESS CONTROL SET-UP.<br/> 2.DMS POWER SET-UP.<br/> 3.IDS POWER SET-UP.<br/> 4.PROCESS CONTROL DATA BASE ENTRY.<br/> 5.(NO PROGRAM).<br/> 6.(NO PROGRAM)<br/> 7.DMS/IDS SENSOR LEVEL CHECK<br/> 8.(NO PROGRAM)<br/> 9.PROCESS CONTROL DISPLAY</p> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |  |        |         |   |                 |    |   |   |                            |    |   |   |                              |    |   |  |
|           | 01                           | <p>During execution, disable/enable of select process control functions can be set.<br/> (Setting procedure)<br/> Substitute values of A, B, and C into the formula below to obtain the adjustment value, referring to Table. 1.<br/> Adjustment value = A + B + C<br/> For example, to enable process control and dirt correction adjustment and disable membrane decrease adjustment, the adjustment value should be "3" (= 1 + 2 + 0).</p> <table border="1" style="margin: 10px auto;"> <thead> <tr> <th></th><th></th><th>Enable</th><th>Disable</th></tr> </thead> <tbody> <tr> <td>A</td><td>Process control</td><td>+1</td><td>0</td></tr> <tr> <td>B</td><td>Dirt correction adjustment</td><td>+2</td><td>0</td></tr> <tr> <td>C</td><td>Membrane decrease adjustment</td><td>+4</td><td>0</td></tr> </tbody> </table> <p>Tab. 1 Process control Enable/disable setting<br/> (Note): Even if "0" is entered, process control function will not be disabled.<br/> (Note) Normal copy mode corrections except for the process control correction mode can be disabled.</p> |           |  | Enable | Disable | A | Process control | +1 | 0 | B | Dirt correction adjustment | +2 | 0 | C | Membrane decrease adjustment | +4 | 0 |  |
|           |                              | Enable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Disable   |  |        |         |   |                 |    |   |   |                            |    |   |   |                              |    |   |  |
| A         | Process control              | +1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0         |  |        |         |   |                 |    |   |   |                            |    |   |   |                              |    |   |  |
| B         | Dirt correction adjustment   | +2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0         |  |        |         |   |                 |    |   |   |                            |    |   |   |                              |    |   |  |
| C         | Membrane decrease adjustment | +4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0         |  |        |         |   |                 |    |   |   |                            |    |   |   |                              |    |   |  |
|           | 02                           | <p>During execution, <span style="border: 1px solid black; padding: 0 2px;">4</span><span style="border: 1px solid black; padding: 0 2px;">4</span> <span style="border: 1px solid black; padding: 0 2px;">*</span><span style="border: 1px solid black; padding: 0 2px;">*</span><span style="border: 1px solid black; padding: 0 2px;">*</span> is displayed in the COPIES MADE display. When the START key is pressed, the drum rotates. When this occurs, the drum marking sensor output can be adjusted by the variable resistor on the process control PWB.<br/> <span style="border: 1px solid black; padding: 0 2px;">4</span><span style="border: 1px solid black; padding: 0 2px;">4</span> <span style="border: 1px solid black; padding: 0 2px;">*</span><span style="border: 1px solid black; padding: 0 2px;">*</span><span style="border: 1px solid black; padding: 0 2px;">*</span> : (Drum marking sensor output: VR2)<br/> Adjustment value: (123-233).</p>                                                                                                      |           |  |        |         |   |                 |    |   |   |                            |    |   |   |                              |    |   |  |
|           | 03                           | <p>During execution, <span style="border: 1px solid black; padding: 0 2px;">4</span><span style="border: 1px solid black; padding: 0 2px;">4</span> <span style="border: 1px solid black; padding: 0 2px;">*</span><span style="border: 1px solid black; padding: 0 2px;">*</span><span style="border: 1px solid black; padding: 0 2px;">*</span> is displayed in the COPIES MADE display. When the START key is pressed, the drum rotates. When this occurs, the process control sensor output can be adjusted by the variable resistor on the process control PWB.<br/> <span style="border: 1px solid black; padding: 0 2px;">4</span><span style="border: 1px solid black; padding: 0 2px;">4</span> <span style="border: 1px solid black; padding: 0 2px;">*</span><span style="border: 1px solid black; padding: 0 2px;">*</span><span style="border: 1px solid black; padding: 0 2px;">*</span> : (Process control sensor output: VR1)<br/> Adjustment value: (668-998).</p>                                                                                                |           |  |        |         |   |                 |    |   |   |                            |    |   |   |                              |    |   |  |
|           | 04                           | <p>During execution, data can be entered using the 10 key pad. When the START key is pressed, the data are registered. (Density data = 75)<br/> * If the density correction data is unnecessarily changed, the process control may not operates properly.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |  |        |         |   |                 |    |   |   |                            |    |   |   |                              |    |   |  |
|           | 05                           | (No program)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |  |        |         |   |                 |    |   |   |                            |    |   |   |                              |    |   |  |
|           | 06                           | (No program)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |  |        |         |   |                 |    |   |   |                            |    |   |   |                              |    |   |  |
|           | 07                           | <p>During execution, the following message is displayed on the basic screen. The output level of the drum marking sensor and the process control sensor can be checked whether they are in the specified range or not.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>SIMULATION NO.44-7<br/> DM/ID SENSOR LEVEL CHECK<br/> DM...***<br/> ID...***</p> </div> <p>"***": Drum marking sensor level (specified range: 123 - 233)<br/> "***": Process control level (specified range: 668 - 998)<br/> (Note) If the above specified range is not satisfied, perform SIMULATION No. 44-2 (drum marking sensor output adjustment) or SIMULATION NO. 44-3 (process control sensor output adjustment).</p>                                                                                                                                                                                                                                                                                                                                                   |           |  |        |         |   |                 |    |   |   |                            |    |   |   |                              |    |   |  |
|           | 08                           | (No program)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |  |        |         |   |                 |    |   |   |                            |    |   |   |                              |    |   |  |

| Main code | Sub code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Ref. page |
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| 44        | 09       | <p>During execution, the following message is displayed, allowing process control data check.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> SIMULATION NO.44-9<br/> FVG NOM:*** FVG PHT:*** FVG TS:***<br/> NVG NOM:*** NVG PHT:*** NVG TS:***<br/> FCL NOM:*** FCL PHT:*** FCL TS:***<br/> NCL NOM:*** NCL PHT:*** NCL TS:***<br/> FCL AE:*** NCL AE:***<br/> DVCL:*** DSENSE:***<br/> DMCNT:*** IDCNT:*** DMRNCT: </div> <p>(Note) "xxx" in the above shows data shown below:</p> <p>FVG NOM : Normal mode grid bias initial value<br/> FVG PHT : Photo mode grid bias initial value<br/> FVG TS : Toner save mode grid bias initial value<br/> NVG NOM : Current normal mode grid bias value<br/> NVG PHT : Current photo mode grid bias value<br/> NVG TS : Current toner save mode grid bias value<br/> FCL NOM : Normal mode copy lamp voltage EXP.1 initial value<br/> FCL PHT : Photo mode copy lamp voltage EXP.1 initial value<br/> FCL TS : Toner save mode copy lamp voltage EXP.1 initial value<br/> NCL NOM : Current normal mode copy lamp voltage EXP.1<br/> NCL PHT : Current photo mode copy lamp voltage EXP.1<br/> NCL TS : Current toner save mode copy lamp voltage EXP.1<br/> FCL AE : AE mode copy lamp voltage (WH level) initial value<br/> NCL AE : Current AE mode copy lamp voltage (WH level)<br/> DVCL : Dirt correction adjustment reference lamp voltage<br/> DSENSE : Dirt correction adjustment sensor initial value registered value<br/> DMCNT : Drum mark sensor gain rank<br/> IDCNT : Process control sensor gain rank<br/> DMRNCT : Membrane decrease adjustment counter</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |
| 46        |          | When the START Key is pressed, process control is executed and then the exposure adjustment can be performed. For adjustment procedure, refer to the exposure adjustment (separate sheet).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 6-30      |
| 47        |          | AE sensor output level adjustment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 6-13      |
| 48        |          | <p>When main code "48" is entered, the following LCD screen is displayed.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> SIMULATION NO.48<br/> INPUT 1-5<br/> 1.FRONT/REAR MAGNI ADJUSTMENT<br/> 2.MAGNI RATIO FINE ADJUSTMENT<br/> 3.LENS SPECIAL.(INPUT)<br/> 4.4/5 MIRROR SPECIAL.(INPUT)<br/> 5.MAGNI RATIO FINE ADJUSTMENT.(INPUT) </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 6-5,6-7   |
| 48        | 01       | <p>During execution, the machine goes into the warmup mode and <span style="border: 1px solid black; padding: 2px;">4 8 A</span> <span style="border: 1px solid black; padding: 2px;">* * *</span> is displayed in the copy quantity display. The focus correction value (reduction) can be entered using the 10 key pad. After entering the adjustment value and pressing the <span style="border: 1px solid black; padding: 2px;">P</span> key, the adjustment value is stored. By pressing <span style="border: 1px solid black; padding: 2px;">→</span> key, normal correction value, magnification ratio correction (reduction) value, focus correction value, focus correction value (enlargement), and magnification ratio correction value (enlargement) can be entered and stored. After completion of warmup of the machine, copying can be performed.</p> <p>(Note) Values in { } are the input range of adjustment value.</p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <div style="display: flex; align-items: center; margin-bottom: 5px;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">4 8 A</div> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">* * *</div> <div style="margin-left: 10px;">: (Focus correction value: reduction) {1-51}</div> </div> <div style="display: flex; align-items: center; margin-bottom: 5px;"> <div style="margin-right: 5px;">↓</div> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;"><span style="border: 1px solid black; padding: 2px;">P</span> key on</div> <div style="margin-left: 10px;">: (Magnification ratio correction value: Normal) {1-99}</div> </div> <div style="display: flex; align-items: center; margin-bottom: 5px;"> <div style="margin-right: 5px;">↓</div> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;"><span style="border: 1px solid black; padding: 2px;">→</span> key on</div> <div style="margin-left: 10px;">: (Magnification ratio correction value: reduction) {1-51}</div> </div> <div style="display: flex; align-items: center; margin-bottom: 5px;"> <div style="margin-right: 5px;">↓</div> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;"><span style="border: 1px solid black; padding: 2px;">→</span> key on</div> <div style="margin-left: 10px;">: (Focus correction value: Normal) {1-119}</div> </div> <div style="display: flex; align-items: center; margin-bottom: 5px;"> <div style="margin-right: 5px;">↓</div> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;"><span style="border: 1px solid black; padding: 2px;">→</span> key on</div> <div style="margin-left: 10px;">: (Focus correction value: enlargement) {1-31}</div> </div> <div style="display: flex; align-items: center; margin-bottom: 5px;"> <div style="margin-right: 5px;">↓</div> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;"><span style="border: 1px solid black; padding: 2px;">→</span> key on</div> <div style="margin-left: 10px;">: (Magnification ratio correction value: enlargement) {1-51}</div> </div> </div> | 6-7       |
|           | 02       | <p>During execution, the machine goes into the warmup mode, and <span style="border: 1px solid black; padding: 2px;">4 8</span> <span style="border: 1px solid black; padding: 2px;">* * *</span> is displayed in the copy quantity display. In this case, paper transport direction magnification ratio adjustment value (mirror speed correction value) can be entered using the 10 key pad. After entering the adjustment value, and pressing the <span style="border: 1px solid black; padding: 2px;">P</span> key, the adjustment value is stored. After completion of the machine warm up, copying can be performed. (1 count: 0.1%)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |

| Main code | Sub code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Ref. page |
|-----------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 48        | 02       | <p>(Adjustment condition)</p> <p>Adjustment range : -1.4%~+1.5%</p> <p>Adjustment value input range : 1~30 (When adjustment value = 15, 0.0%)</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="text-align: center;"> <p>1                      15                      30</p> <p>-----</p> <p>-1.4%                      0.0%                      +1.5%</p> </div> <div style="margin-left: 10px;"> <p>(Adjustment value range)</p> <p>(Scan speed changing rate)</p> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |
|           | 03       | <p>During execution, the machine goes into the warmup mode and <span style="border: 1px solid black; padding: 2px;">4 8 A</span> <span style="border: 1px solid black; padding: 2px;">* * *</span> is displayed in the copy quantity display. The focus correction value (reduction) can be entered using the 10 key pad. After entering the adjustment value, press the START Key to store the adjustment value. By pressing <span style="border: 1px solid black; padding: 2px;">→</span> key, normal correction value, and the magnification ratio correction (enlargement) value can be entered and stored. (The adjustment value input range and the default value are the same as SIM NO.48-1.)</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 2px;">4 8 A</div> <div style="border: 1px solid black; padding: 2px;">* * *</div> </div> <div style="margin-left: 10px;">↓</div> <div style="margin-left: 10px;">: (Focus correction value: reduction)</div> <div style="margin-left: 10px;">↓ <span style="border: 1px solid black; padding: 2px;">→</span> key on</div> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 2px;">4 8 B</div> <div style="border: 1px solid black; padding: 2px;">* * *</div> </div> <div style="margin-left: 10px;">↓</div> <div style="margin-left: 10px;">: (Magnification ratio correction value: Normal)</div> <div style="margin-left: 10px;">↓ <span style="border: 1px solid black; padding: 2px;">→</span> key on</div> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 2px;">4 8 C</div> <div style="border: 1px solid black; padding: 2px;">* * *</div> </div> <div style="margin-left: 10px;">↓</div> <div style="margin-left: 10px;">: (Focus correction value: enlargement)</div> </div>                            |           |
|           | 04       | <p>During execution, the machine goes into the warmup mode and <span style="border: 1px solid black; padding: 2px;">4 8 A</span> <span style="border: 1px solid black; padding: 2px;">* * *</span> is displayed in the copy quantity display. The magnification ratio correction value (reduction) can be entered using the 10 key pad. After entering the adjustment value, press the START Key to store the adjustment value. By pressing <span style="border: 1px solid black; padding: 2px;">→</span> key, focus correction value, and the magnification ratio correction value (enlargement) can be entered and stored. (The adjustment value input range and the default range are the same as SIM NO.48-1.)</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 2px;">4 8 A</div> <div style="border: 1px solid black; padding: 2px;">* * *</div> </div> <div style="margin-left: 10px;">↓</div> <div style="margin-left: 10px;">: (Magnification ratio correction value: reduction)</div> <div style="margin-left: 10px;">↓ <span style="border: 1px solid black; padding: 2px;">→</span> key on</div> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 2px;">4 8 B</div> <div style="border: 1px solid black; padding: 2px;">* * *</div> </div> <div style="margin-left: 10px;">↓</div> <div style="margin-left: 10px;">: (Focus correction value: Normal)</div> <div style="margin-left: 10px;">↓ <span style="border: 1px solid black; padding: 2px;">→</span> key on</div> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 2px;">4 8 C</div> <div style="border: 1px solid black; padding: 2px;">* * *</div> </div> <div style="margin-left: 10px;">↓</div> <div style="margin-left: 10px;">: (Magnification ratio correction value: enlargement)</div> </div> |           |
|           | 05       | <p>During execution, <span style="border: 1px solid black; padding: 2px;">4 8</span> <span style="border: 1px solid black; padding: 2px;">* * *</span> is displayed in the copy quantity display. In this case, the paper transport direction magnification ratio adjustment value (mirror speed correction value) can be entered using the 10 key pad. After entering the adjustment value, press the START Key to store the adjustment value. (1 count = 0.1%)</p> <p>(Adjustment condition)</p> <p>Adjustment range : -1.4%~+1.5%</p> <p>Adjustment value input range : 1~30 (When adjustment value = 15, 0.0%)</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="text-align: center;"> <p>1                      15                      30</p> <p>-----</p> <p>-1.4%                      0.0%                      +1.5%</p> </div> <div style="margin-left: 10px;"> <p>(Adjustment value range)</p> <p>(Scan speed changing rate)</p> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |
| 50        |          | <p>When main code "50" is entered, the following LCD screen is displayed.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>SIMULATION NO.50</p> <p>INPUT 1-4</p> <p>1. LEAD EDGE, LEAD EDGE VOID AREA ADJUSTMENT</p> <p>2. LEAD EDGE ADJUSTMENT. (EASY)</p> <p>3. LEAD EDGE/VOID ADJUSTMENT. (INPUT)</p> <p>4. VOID ADJUSTMENT.</p> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |
|           | 01       | <p>During execution, the machine goes into the warmup mode and <span style="border: 1px solid black; padding: 2px;">5 0 A</span> <span style="border: 1px solid black; padding: 2px;">* * *</span> is displayed in the copy quantity display. In this case, 50A (distance between MHP and the image lead edge) adjustment value can be entered using the 10 key pad. After entering the adjustment value, press the <span style="border: 1px solid black; padding: 2px;">P</span> key to store the adjustment value. Similarly when pressing <span style="border: 1px solid black; padding: 2px;">→</span> key, 50B (time date from the image lead edge to RRC ON), 50C (data to turn on PFC how earlier than RRC ON), and 50D (Void amount data) are selected and displayed. The adjustment values can be entered and stored in the same manner. After completion of warming up, copying can be performed. (Note: Pressing the START Key to make a copy also stores the setting into memory)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |

| Main code | Sub code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Ref. page |
|-----------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 50        | 01       | <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">5 0 A * * *</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">5 0 B * * *</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">5 0 C * * *</div> <div style="border: 1px solid black; padding: 2px;">5 0 D * * *</div> </div> <div> <p>Distance between MHP and image lead edge (1 count = 0.22mm) {0-99}</p> <p>→ key on</p> <p>Time data from image lead edge to RRC ON (1 count = 0.5ms) {0-99}</p> <p>→ key on</p> <p>Data to turn on PFC how earlier than RRC ON (1 count = 1ms) {1-20}</p> <p>→ key on</p> <p>Void amount data (1 count = 0.5mm) {0-20}</p> </div> </div> <div style="margin-top: 10px;"> </div> <p>A: 50A data<br/>B: 50B data<br/>C: 50C data<br/>(Note) Values in { } are the adjustment value input range.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 6-12      |
|           | 02       | <p>During execution, the machine goes into the warmup mode and 5 0 A * * * is displayed in the copy quantity display. In this case, the lead edge shift value made by copying at L1 magnification ratio (200%) can be entered using the 10 key pad. After entering, press [P] key to store the adjustment value. Similarly when pressing → key, the display in the copy quantity display changes to 50B (lead edge shift made by copying at L2:magnification ratio 100%), 50C (data how earlier to turn on PFC than to turn on RRC), and 50D (void amount data) are selected and displayed. The adjustment values can be entered and stored in the same manner. After completion of warming up, copying can be performed.</p> <p>(Note: Pressing the START Key to make a copy also stores the setting in memory)</p> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">5 0 A * * *</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">5 0 B * * *</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">5 0 C * * *</div> <div style="border: 1px solid black; padding: 2px;">5 0 D * * *</div> </div> <div> <p>L1 ..... Default 0</p> <p>→ key on</p> <p>L2 ..... 0</p> <p>→ key on</p> <p>(Same as SIMULATION NO.50-1 C.) ..... 50</p> <p>→ key on</p> <p>(Same as SIMULATION NO.50-1 D.) ..... 0</p> <p>→ key on</p> </div> </div> <p>(Adjustment procedure)</p> <ol style="list-style-type: none"> <li>Set A, B, and D to "0."</li> <li>Place a scale on the original table.</li> <li>Make a copy at 200% magnification ratio.</li> <li>Make a copy at 100% magnification ratio.</li> <li>With 5 0 A * * * displayed in the copy quantity display, enter the lead edge shift amount at 200% copy using the 10 key pad. (Example: For 35.5mm, enter 355.) Press the [P] Key to store.</li> <li>With "50B * * *" displayed in the copy quantity display, enter the lead edge shift amount at 100% copy using the 10 key pad. (Example: For 35.5mm, enter 355.) Press the [P] Key to store.</li> <li>Press the start key to make a copy to confirm copy lead edge (0±3mm).</li> </ol> <p>With the above procedure, when L1 and L2 are entered, values A and B in SIMULATION 50-1 are automatically calculated.</p> | 6-13      |
|           | 03       | <p>During execution, 5 0 A * * * is displayed in the copy quantity display. Similar to SIMULATION 50-1, the distance between MHP and the image lead edge (1 count = 0.22mm), time data from image lead edge to RRC ON (1 count = 0.5mm), data how earlier to turn on PFC than RRC on, (1 count = 1 ms) void amount data (1 count = 1mm) can be entered. (The adjustment value range is same as SIMULATION NO.50-1.) (Note: Copies cannot be produced in this sub code)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |
|           | 04       | <p>During execution, "50 * * *" is displayed in the copy quantity display. The void amount data (1 count = 0.5mm) can be entered in the same manner as SIMULATION NO.50-1, 50D.<br/>(Adjustment value Input range: 0 - 20)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |
| 51        |          | <p>When main code "51" is entered, the following LCD screen is displayed.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>SIMULATION NO.51</p> <p>INPUT 1-4</p> <ol style="list-style-type: none"> <li>1.PSPS TIMING BUCKLE</li> <li>2.RRC PAPER BUCKLE ADJUSTMENT</li> <li>3.RRC PAPER BUCKLE ADJUSTMENT.(INPUT)</li> <li>4.BRAKE CLUTCH TIMER SET.</li> </ol> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |



| Main code | Sub code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Ref. page |     |      |      |     |      |   |   |  |   |  |  |   |   |  |  |   |  |   |  |   |   |  |  |   |  |   |  |   |  |   |   |  |  |  |   |   |  |   |  |  |   |  |
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| 52        | 02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Duplex copy tray rear plate home position can be adjusted.<br>During execution, the start lamp lights up, and the currently set adjustment value is displayed in the COPIES MADE display. The adjustment value can be entered with the 10 key pad. The adjustment value range is 0 - 99. The adjustment value 40 is the reference value.<br>(Adjustment procedure)<br>For AB series destinations, the reference value is for A4 size setting. When the set value is greater, the distance between the rear plate and its home position becomes greater.<br>For inch series destinations, the reference value is for LETTER size setting. When the set value is greater, the distance between the rear plate and its home position becomes greater.<br>(1 count = 0.58mm) |           |     |      |      |     |      |   |   |  |   |  |  |   |   |  |  |   |  |   |  |   |   |  |  |   |  |   |  |   |  |   |   |  |  |  |   |   |  |   |  |  |   |  |
| 53        | When main code "53" is entered, the following LCD screen is displayed.<br><div><div>SIMULATION NO.53<br/>01-06:RADF STOP POINT SETUP</div><table><tr><th></th><th>NOM</th><th>THIN</th><th>SIMP</th><th>DUP</th><th>STEP</th></tr><tr><td>1</td><td>*</td><td></td><td>*</td><td></td><td></td></tr><tr><td>2</td><td>*</td><td></td><td></td><td>*</td><td></td></tr><tr><td>3</td><td></td><td>*</td><td>*</td><td></td><td></td></tr><tr><td>4</td><td></td><td>*</td><td></td><td>*</td><td></td></tr><tr><td>5</td><td>*</td><td></td><td></td><td></td><td>*</td></tr><tr><td>6</td><td></td><td>*</td><td></td><td></td><td>*</td></tr></table><div>07-09:RADF SENSOR ADJUSTMENT.<br/>07. REGIST 08. TIMING 09. EXIT/REVERSAL</div></div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           | NOM | THIN | SIMP | DUP | STEP | 1 | * |  | * |  |  | 2 | * |  |  | * |  | 3 |  | * | * |  |  | 4 |  | * |  | * |  | 5 | * |  |  |  | * | 6 |  | * |  |  | * |  |
|           | NOM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | THIN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SIMP      | DUP | STEP |      |     |      |   |   |  |   |  |  |   |   |  |  |   |  |   |  |   |   |  |  |   |  |   |  |   |  |   |   |  |  |  |   |   |  |   |  |  |   |  |
| 1         | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | *         |     |      |      |     |      |   |   |  |   |  |  |   |   |  |  |   |  |   |  |   |   |  |  |   |  |   |  |   |  |   |   |  |  |  |   |   |  |   |  |  |   |  |
| 2         | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           | *   |      |      |     |      |   |   |  |   |  |  |   |   |  |  |   |  |   |  |   |   |  |  |   |  |   |  |   |  |   |   |  |  |  |   |   |  |   |  |  |   |  |
| 3         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | *         |     |      |      |     |      |   |   |  |   |  |  |   |   |  |  |   |  |   |  |   |   |  |  |   |  |   |  |   |  |   |   |  |  |  |   |   |  |   |  |  |   |  |
| 4         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           | *   |      |      |     |      |   |   |  |   |  |  |   |   |  |  |   |  |   |  |   |   |  |  |   |  |   |  |   |  |   |   |  |  |  |   |   |  |   |  |  |   |  |
| 5         | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |     | *    |      |     |      |   |   |  |   |  |  |   |   |  |  |   |  |   |  |   |   |  |  |   |  |   |  |   |  |   |   |  |  |  |   |   |  |   |  |  |   |  |
| 6         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |     | *    |      |     |      |   |   |  |   |  |  |   |   |  |  |   |  |   |  |   |   |  |  |   |  |   |  |   |  |   |   |  |  |  |   |   |  |   |  |  |   |  |
|           | 01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | In the case of normal paper and single -sided originals the RADF stop plate position can be adjusted.<br>(1 count = 1.007mm)<br>During execution, the start lamp lights up, and the currently set value is displayed in the COPIES MADE display. The adjustment value (range: 1-15) can be entered using the 10 key pad. When the adjustment value is made smaller, the stop position is in the lower side of the reference stop position. When the adjustment value is made greater, the stop position is in the upper side of the current stop position.                                                                                                                                                                                                               |           |     |      |      |     |      |   |   |  |   |  |  |   |   |  |  |   |  |   |  |   |   |  |  |   |  |   |  |   |  |   |   |  |  |  |   |   |  |   |  |  |   |  |
|           | 02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | With normal paper and two-sided originals, the RADF stop position can be adjusted in the same manner as 53-1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |     |      |      |     |      |   |   |  |   |  |  |   |   |  |  |   |  |   |  |   |   |  |  |   |  |   |  |   |  |   |   |  |  |  |   |   |  |   |  |  |   |  |
|           | 03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | With thin paper and single two-sided originals, the RADF stop position can be adjusted in the same manner as 53-1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |     |      |      |     |      |   |   |  |   |  |  |   |   |  |  |   |  |   |  |   |   |  |  |   |  |   |  |   |  |   |   |  |  |  |   |   |  |   |  |  |   |  |
|           | 04                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | With thin paper and two-sided originals, the RADF stop position can be adjusted in the same manner as 53-1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |     |      |      |     |      |   |   |  |   |  |  |   |   |  |  |   |  |   |  |   |   |  |  |   |  |   |  |   |  |   |   |  |  |  |   |   |  |   |  |  |   |  |
|           | 05                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | With normal paper (STEP feed) mode, the RADF stop position can be adjusted in the same manner as 53-1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |      |      |     |      |   |   |  |   |  |  |   |   |  |  |   |  |   |  |   |   |  |  |   |  |   |  |   |  |   |   |  |  |  |   |   |  |   |  |  |   |  |
|           | 06                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | With thin paper (STEP feed) mode, the RADF stop position can be adjusted in the same manner as 53-1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |     |      |      |     |      |   |   |  |   |  |  |   |   |  |  |   |  |   |  |   |   |  |  |   |  |   |  |   |  |   |   |  |  |  |   |   |  |   |  |  |   |  |
|           | 07                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | During execution, the threshold value of the RADF resist sensor is adjusted and the adjustment value is displayed in the COPIES MADE quantity display.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |      |      |     |      |   |   |  |   |  |  |   |   |  |  |   |  |   |  |   |   |  |  |   |  |   |  |   |  |   |   |  |  |  |   |   |  |   |  |  |   |  |
|           | 08                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | During execution, the threshold value of the RADF timing sensor is adjusted and the adjustment value is displayed in the COPIES MADE quantity display.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |      |      |     |      |   |   |  |   |  |  |   |   |  |  |   |  |   |  |   |   |  |  |   |  |   |  |   |  |   |   |  |  |  |   |   |  |   |  |  |   |  |
|           | 09                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | During execution, the threshold value of the RADF reverse sensor is adjusted and the adjustment value is displayed in the COPIES MADE quantity display.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |     |      |      |     |      |   |   |  |   |  |  |   |   |  |  |   |  |   |  |   |   |  |  |   |  |   |  |   |  |   |   |  |  |  |   |   |  |   |  |  |   |  |

## (8) Default values

| SIMULATION No. |          | Adjustment item                                      | Set value (default) when clearing memory |                                                                      | Standard set value             |
|----------------|----------|------------------------------------------------------|------------------------------------------|----------------------------------------------------------------------|--------------------------------|
| Main code      | Sub code |                                                      | Adjustment range                         | Default                                                              |                                |
| 8              | 1        | Developing bias output                               | 3~56                                     | 30/ -203.6V                                                          | 30/ -203.6V                    |
|                | 2        | Main charger output (ME/RE)                          | 137~510                                  | 380/ -728V                                                           | 380/ -728V                     |
|                | 3        | Main charger output (PHOTO)                          | 137~510                                  | 250. -485V                                                           | 250/ -485V                     |
|                | 4        | Main charger output (TS)                             | 137~510                                  | 330/ -634A                                                           | 330/ -634V                     |
|                | 6        | Transfer charger output                              | 3~56                                     | 35/ -424 $\mu$ A                                                     | 35/ -424V                      |
|                | 7        | Separation charger output                            | 18~56                                    | 28/ 258V                                                             | 28/ 258V                       |
| 21             | 1        | Maintenance cycle setting                            | 1~3                                      | 3.NONE                                                               | 3.NONE                         |
| 25             | 2        | Developer adjustment                                 | 0~255                                    | 128.                                                                 | 128.                           |
| 26             | 1        | Option setting                                       | 1~3                                      | 1. FINISHER/NO SORTER.                                               | —                              |
|                | 2        | Tray 1 size setting                                  | 1~3                                      | 1. 8.5*11                                                            | 2. A4<br>3. B5                 |
|                | 3        | Auditor mode                                         | 1~4                                      | 1. Built-in auditor mode                                             | —                              |
|                | 5        | Counter mode setting                                 | 0~3                                      | 0. DOUBLE CNT(TOTAL/MAINTENANCE)                                     | 0.                             |
|                | 6        | Destination setting                                  | 1~9                                      | 1. SEC                                                               | 4. JAPAN. 15A<br>2. JAPAN. 20A |
|                | 7        | Drum sensitivity setting                             | 1~3                                      | 2. $\pm 0$                                                           | —                              |
| 27             | 1        | RIC communication trouble setting                    | 0~1                                      | 1. (No trouble)                                                      | 0.                             |
| 43             |          | Fusing temperature setting                           | 1~5                                      | 3. 200 C (Japan/20A, the other destinations)<br>4. 205 C (Japan/15A) | 3.<br>4.                       |
|                |          |                                                      |                                          |                                                                      |                                |
| 44             | 1        | Process control setting                              | 0~7                                      | 0. Process control correction only enabled.                          | —                              |
|                | 4        | Process control reference value registration         | 0~99                                     | 75                                                                   | 75                             |
| 46             |          | ME/EX1                                               |                                          | 680.                                                                 | 680.                           |
|                |          | ME/EX5                                               |                                          | 580.                                                                 | 580.                           |
|                |          | PHOTO/EX1                                            |                                          | 580.                                                                 | 580.                           |
|                |          | PHOTO/EX1                                            |                                          | 480.                                                                 | 480.                           |
|                |          | TS/EX1                                               |                                          | 650.                                                                 | 650.                           |
|                |          | TS/EX5                                               |                                          | 550.                                                                 | 550.                           |
|                |          | AE/NORMAL                                            |                                          | 610.                                                                 | 610.                           |
|                |          | AE/TS                                                |                                          | 510.                                                                 | 510.                           |
| 47             |          |                                                      | 0~255                                    | 0.                                                                   | 130 ~ 252                      |
| 48             | 1        | A: Focus correction value: Reduction                 | 1~51                                     | 26.                                                                  | 26.                            |
|                |          | B: Magnification ratio correction value: Normal      | 1~99                                     | 50.                                                                  | 50.                            |
|                |          | C: Magnification ratio correction value: Reduction   | 1~51                                     | 26.                                                                  | 26.                            |
|                |          | D: Focus correction value: Normal                    | 1~119                                    | 60.                                                                  | 60.                            |
|                |          | E: Focus correction value: Enlargement               | 1~31                                     | 16.                                                                  | 16.                            |
|                |          | F: Magnification ratio correction: Enlargement       | 1~51                                     | 26.                                                                  | 26.                            |
|                | 2        | Mirror speed correction                              | 0~30                                     | 15.                                                                  | 15.                            |
|                | 3        | A: Focus correction value: Reduction                 | 1~51                                     | 26.                                                                  |                                |
|                |          | B: Magnification ratio correction value: Normal      | 1~99                                     | 50,                                                                  |                                |
|                |          | C: Focus correction value: Enlargement               | 1~31                                     | 16, 26<br>50<br>16                                                   |                                |
|                | 4        | A: Magnification ratio correction value: Reduction   | 1~51                                     | 26.                                                                  | 26.                            |
|                |          | B: Focus correction value: Normal                    | 1~119                                    | 60,                                                                  | 60.                            |
|                |          | C: magnification ratio correction value: Enlargement | 1~51                                     | 26.                                                                  | 26.                            |
|                | 5        | Mirror speed correction                              | 0~30                                     | 15.                                                                  | 15.                            |
| 50             | 1        | A: RRC-A (Distance)                                  | 0~99                                     | 0.                                                                   | 50.                            |
|                |          | B: RRC-B (Time)                                      | 0~99                                     | 0.                                                                   | 50.                            |
|                |          | C: PFC (RRC previous time)                           | 1~20                                     | 10.                                                                  | 10.                            |
|                |          | D: Void amount                                       | 0~20                                     | 10.                                                                  | 10.                            |
|                | 2        | A: L1                                                | 0~999                                    | 0.                                                                   | —                              |
|                |          | B: L2                                                | 0~999                                    | 0.                                                                   | —                              |
|                |          | C: PFC (RRC previous time)                           | 1~20                                     | 10.                                                                  | 10.                            |
|                |          | D: Void amount                                       | 0~20                                     | 10.                                                                  | 10.                            |
|                | 3        | A: RRC-A (Distance)                                  | 0~99                                     | 0.                                                                   | 50.                            |
|                |          | B: RRC-B (Time)                                      | 0~99                                     | 0.                                                                   | 50.                            |
|                |          | C: PFC (RRC previous time)                           | 1~20                                     | 10.                                                                  | 10.                            |
|                |          | D: Void amount                                       | 0~20                                     | 10.                                                                  | 10.                            |
|                | 4        | Void amount                                          | 0~20                                     | 10.                                                                  | 10.                            |

| SIMULATION No. |          | Adjustment item                              | Set value (default) when clearing memory |         | Standard set value |
|----------------|----------|----------------------------------------------|------------------------------------------|---------|--------------------|
| Main code      | Sub code |                                              | Adjustment range                         | Default |                    |
| 51             | 1        | Separation pawl timing                       | 0~20                                     | 8.      | 8.                 |
|                | 2        | A: Multi tray                                | 0~50                                     | 15.     | 35.                |
|                |          | B: Tray 1                                    | 0~50                                     | 15.     | 22.                |
|                |          | C: Tray 2                                    | 0~50                                     | 15.     | 22.                |
|                |          | D: Tray 3                                    | 0~50                                     | 15.     | 22.                |
|                |          | E: Duplex tray                               | 0~50                                     | 15.     | 22.                |
|                | 3        | A: Multi tray                                | 0~50                                     | 15.     | 35.                |
|                |          | B: Tray 1                                    | 0~50                                     | 15.     | 22.                |
|                |          | C: Tray 2                                    | 0~50                                     | 15.     | 22.                |
|                |          | D: Tray 3                                    | 0~50                                     | 15.     | 22.                |
|                |          | E: Duplex tray                               | 0~50                                     | 15.     | 22.                |
|                | 4        | Brake clutch timing setting                  | 0~50                                     | 25.     | 25.                |
| 52             | 1        | Duplex copy alignment plate adjustment value | 0~99                                     | 40.     | 40.                |
|                | 2        | Duplex copy rear plate adjustment value      | 0~99                                     | 40.     | 40.                |
| 53             | 1        | RADF normal paper one-side copy              | 1~15                                     | 8.      | 8.                 |
|                | 2        | RADF normal paper duplex copy                | 1~15                                     | 8.      | 8.                 |
|                | 3        | RADF thin paper one-side copy                | 1~15                                     | 8.      | 8.                 |
|                | 4        | RADF thin paper duplex copy                  | 1~15                                     | 8.      | 8.                 |
|                | 5        | RADF normal paper, step feed                 | 1~15                                     | 8.      | 8.                 |
|                | 6        | RADF thin paper, step feed                   | 1~15                                     | 8.      | 8.                 |

### (9) JAM display and contents

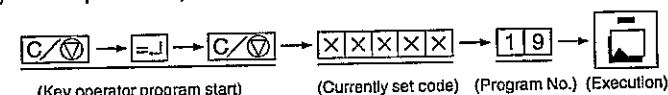
| Display/Print | Contents                  |
|---------------|---------------------------|
| BYPASS/BYPAS  | Manual feed tray FEED JAM |
| TRAY1         | Tray 1 FEED JAM           |
| TRAY2         | Tray 2 FEED JAM           |
| TRAY3         | Tray 3 FEED JAM           |
| DUP           | DUPLEX FEED JAM           |
| MPFD          | MPFD REMAIN JAM           |
| PFD1          | PFD1 REMAIN JAM           |
| PFD2          | PFD2 REMAIN JAM           |
| PFD3          | PFD3 REMAIN JAM           |
| DPFD          | DPFD REMAIN JAM           |
| PPD1          | PPD1 REMAIN JAM           |
| PPD2          | PPD2 REMAIN JAM           |
| PPD3          | PPD3 REMAIN JAM           |
| PSD           | PSD REMAIN JAM            |
| POD           | POD REMAIN JAM            |
| DSBD          | DSBD REMAIN JAM           |
| DPPD          | DPPD REMAIN JAM           |
| DPID          | DPID REMAIN JAM           |
| SB            | DPPD NON-REACH JAM        |
| POD2          | POD2 REMAIN JAM           |
| SPID          | SORTER PAPER ENTRY JAM    |
| SPOD          | SORTER PAPER EXIT JAM     |
| OG FD         | RADF PRE-PAPER FEED       |
| OG ST         | RADF PAPER FEED JAM       |
| EXT           | RADF PAPER EXIT JAM       |
| REV           | RADF REVERSE JAM          |

## (10) Key operator program

(Initial setting)

The key operator code is factory-set to "00000."

(Registration procedure)



### Program list

| Code No. | Program name                                      | Function                                                                                                                 |
|----------|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| P10      | Auditing Mode                                     | Enables or disables the basic auditing mode for copier access.                                                           |
| P11      | Copies by Account                                 | Displays or prints (*) the total number of copies made against account numbers.                                          |
| P12      | Billing by Account                                | Displays or prints (*) the accumulated cost of copies by account number.                                                 |
| P13      | Billing Clear Mode                                | Clears all audit accounts or selectively clears individual accounts.                                                     |
| P14      | Account Number Control                            | Enters account numbers, clears account numbers, changes an account number, or prints (*) all assigned account numbers.   |
| P15      | Price/Copy Setting                                | Sets up to 3 levels of price per copy against account numbers.                                                           |
| P16      | Account Limit Setting                             | Sets the maximum number of copies which can be against an assigned account number.                                       |
| P17      | Machine Identification Number                     | Enters or prints (*) the machine number.                                                                                 |
| P18      | Account Number Security                           | Guards against trial and error entering of audit account numbers.                                                        |
| P19      | Key Operator Code Number Change                   | Changes the Key operator Code Number.                                                                                    |
| P20      | Auto Exposure Adjust                              | Lightens or darkens copies in the Automatic Exposure Mode.                                                               |
| P21      | Power Up Timer                                    | Activates and sets a time interval after which the copier automatically turns off (Set range - 10 minutes to 24 hours).  |
| P22      | Toner Save Mode                                   | Reduces toner consumption.                                                                                               |
| P23      | Auto Clear Setting                                | Sets a time interval after which the copier returns to the initial settings (Set range: 10 sec to 240 sec.)              |
| P24      | Add or Change Extra Presets                       | Adds or changes reduction and enlargement preset copy ratios                                                             |
| P25      | Limit of Maximum Copies Selected                  | Sets the limit of maximum copies to be selected.                                                                         |
| P26      | Initial Margin Shift Setting                      | Sets the initial margin shift values.                                                                                    |
| P27      | Erase Width Adjustment                            | Sets the amount of the erase area.                                                                                       |
| P28      | Initial Status Setting                            | Sets the copier's initial settings in the ready condition.                                                               |
| P29      | Total Copy Count                                  | Displays or prints (*) the total copy counts of the copier, RADF, duplex modular, and staple sorter                      |
| P42      | Right/Left Shift Direction Selection              | Determines whether shift change direction is to be allowed.                                                              |
| P43      | Erase Mode Selection                              | Sets the initial mode for erase function.                                                                                |
| P44      | Restrict Storage of Inserts in Job Program Memory | Prevents insert pages from being stored in job memory.                                                                   |
| P45      | Message Time Setting                              | Sets the length of time that messages are displayed.                                                                     |
| P46      | Disable Operation                                 | Prevents the copier from being started by people other than the key operator.                                            |
| P70      | Disabling of Auto Paper Selection                 | Prevents automatic paper selection.                                                                                      |
| P71      | Disabling of Auto tray Switching                  | Prevents automatic switching between the paper trays. (Useful when using paper of different weights in different trays.) |
| P72      | Manual Feed Tray Prohibited in Duplex Copy        | Prevents the use of the Manual Feed Tray during duplex copying.                                                          |
| P73      | Disabling of Job Program Changing                 | Prevents stored programs from being altered.                                                                             |
| P74      | Disabling of Document Feeder                      | Prevents the use of the RADF when it malfunctions.                                                                       |
| P75      | Disabling of Duplex Copying                       | Prevents the duplex system from operating when it malfunctions. Allows the use of the copier but not the duplex system.  |
| P76      | Disabling of Stapler                              | Prevents damage to the stapler while awaiting repair service.                                                            |
| P77      | Disabling of Covers and Inserts                   | Prevents the selection of COVERS and INSERTS mode.                                                                       |
| P78      | Restricted Access to Paper Trays                  | Provides access to paper trays only for adding paper or during misfeed removal.                                          |
| P90      | Display the List of All P Codes                   | Sequentially prints (*) all available programs.                                                                          |
| P92      | P Code List Printout                              | All key operator program list is printed (*).                                                                            |

\* For printing, the optional commander (SF-EA13) is required.



## © 28-04 (Simulation set values print)

```

SIM.08_01 ----- 30
  _02 ----- 428
  _03 ----- 301
  _04 ----- 393
  _06 ----- 47
  _07 ----- 24

SIM.21_01 ----- 3

SIM.25_02 ----- 148

SIM.26_01 ----- 2
  _02 ----- 2
  _03 ----- 1
  _05 ----- 0
  _06 ----- 4
  _07 ----- 2
  _08 -- A: 12
        B: 12
        C: 12

SIM.27_01 ----- 2
  _05 ----- 00000000

SIM.43 ----- 3

SIM.44_01 ----- 6
  _02 ----- 2
  _03 ----- 1
  _04 ----- 75

SIM.46 -- AE_W: 615
        AE_W(TS): 595
        ME1: 660
        ME5: 580
        PHT1: 610
        PHT5: 520
        ME1(TS): 650
        ME5(TS): 575

SIM.48_01 -- A: 28
        B: 70
        C: 31
        D: 84
        E: 15
        F: 33
  _02 ----- 15
  _03 -- A: 28
        B: 70
        C: 15
  _04 -- A: 31
        B: 84
        C: 33
  _05 ----- 15

SIM.50_01 -- A: 90
  (_03) B: 75
        C: 10
        D: 15
  _04 ----- 15

SIM.51_01 ----- 8
  _02 -- A: 35
  (_03) B: 22
        C: 22
        D: 22
        E: 22
  _04 ----- 25

SIM.52_01 ----- 40
  _02 ----- 39

```



**CAUTION FOR BATTERY REPLACEMENT**

(Danish)

ADVARSEL !

Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.

Udskiftning må kun ske med batteri  
af samme fabrikat og type.

Lever det brugte batteri tilbage til leverandoren.

(English)

Caution !

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type  
recommended by the equipment manufacturer.

Discard used batteries according to manufacturer's instructions.

(Finnish)

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.

Vaihda paristo ainoastaan laitevalmistajan suosittelemaan  
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden  
mukaisesti.

(French)

ATTENTION

Il y a danger d'explosion si il y a remplacement incorrect  
de la batterie. Remplacer uniquement avec une batterie du  
même type ou d'un type recommandé par le constructeur.Mettre au rebut les batteries usagées conformément aux  
instructions du fabricant.

(Swedish)

VARNING

Explosionsfare vid felaktigt batteribyte.

Använd samma batterityp eller en ekvivalent  
typ som rekommenderas av apparattillverkaren.Kassera använt batteri enligt fabrikantens  
instruktion.

# SHARP

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